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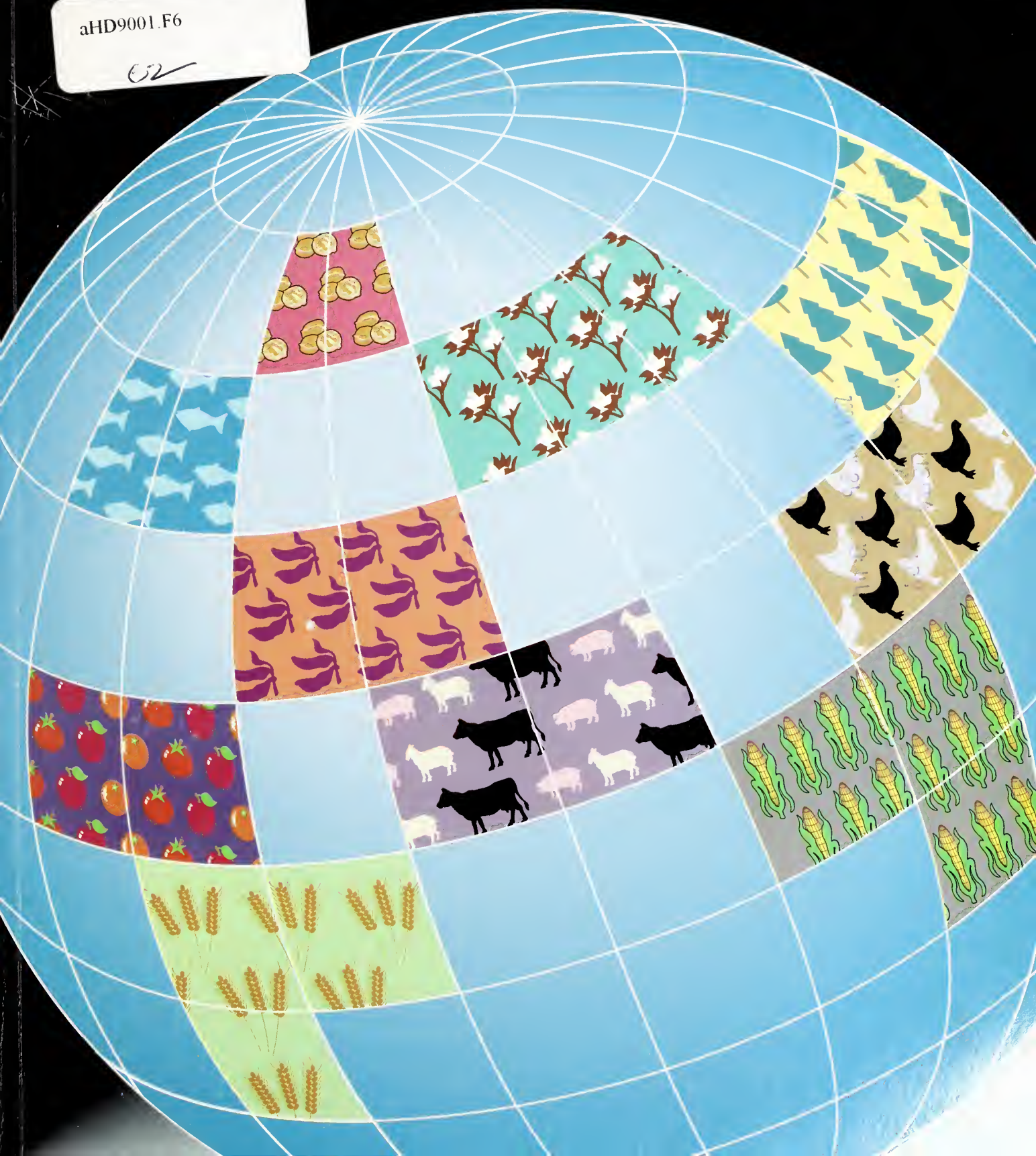
United States
Department of
Agriculture

Foreign
Agricultural
Service

Foreign Agriculture 1989

aHD9001.F6

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October 1989

Foreign Agriculture 1989

Foreign Agriculture 1989 is the first edition of a new, annual publication designed as a reference guide for U.S. exporters, farm organizations, and others who need information on agriculture overseas. The publication is produced by the Foreign Agricultural Service (FAS) Information Division. The "Country Profiles" cover agricultural production, policies, and trade in 65 countries around the world. The "Atlas of World Agriculture" presents additional production and trade information using maps and charts.

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Acknowledgments

Foreign Agriculture 1989 is based on annual reports prepared by the FAS network of agricultural counselors, attaches, and trade officers stationed at embassies and trade offices throughout the world. The report also draws on data produced by the FAS staff in Washington, DC, the Economic Research Service, and the World Agricultural Outlook Board of the U.S. Department of Agriculture. Additional information and materials were provided by the U.S. Department of State. Several maps in this volume are reprinted, with permission, from *Goode's World Atlas*, courtesy of Rand McNally & Company.

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Country Profiles

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Algeria

Profile of agriculture

As a result of its arid to semi-arid climate, Algeria's agricultural production varies enormously, depending on year-to-year fluctuations in rainfall. The country usually experiences mild, rainy winters and hot, dry summers.

To compound difficulties caused by drought, Algeria also faces problems of poor irrigation and loss of arable land to desert encroachment. Less than 1 percent of agricultural land is irrigated. In addition, 90 percent of the country is desert which is increasing at a rate of 200 meters a year.

Erosion continues to be a major problem in the north with more than

40,000 metric tons of topsoil carried into the sea each year. Erosion has been aggravated by forest fires and overgrazing.

Algeria's major crops include wheat, barley, oats, olives, vegetables, citrus, dates, and table and wine grapes. Livestock production, mainly sheep, is the major agricultural activity of the high plateau regions.

Algeria remains a middle-income country with a per capita income estimated at about \$2,800 a year. With 24 million people, it has one of the fastest growing populations in the world, increasing by 3.1 percent per year.

Production highlights

In 1988, Algerian agricultural production suffered from severe dry weather aggravated by a desert locust invasion. Grain production fell and the country was forced to rely on imports to meet its requirements for wheat and feed grains.

Despite productivity improvements, prospects for the 1989 harvest are not bright, due partly to continued dry weather. Other factors hurting production include: inadequate use of fertilizers as producers try to cut costs; farm equipment shortages; and poor transportation systems to get crops to market.

In 1988, production of grain and feed crops declined from 2 million to 1.7 million tons and a further decline is expected in 1989 to 1.5 to 1.8 million tons. The declines occurred largely because of a reduction in area planted to grains and a severe drought throughout the growing season.

In 1988, Algeria continued to be relatively self-sufficient in the production of fresh vegetables such as potatoes, carrots, artichokes, and legumes. In 1989, area planted to fresh vegetables likely expanded.



Algeria at a Glance

Population (1988): 24.2 million

Urban population: 12.1 million

Population growth rate: 3.1%

Per capita income (1988): \$2,800

Arable land area: 39.7 million hectares

Major crops: Grains, pulses, citrus, vegetables, grapes, date palms

Livestock sector: Mainly sheep in high plateau regions

Leading agricultural exports: Wine, vegetables, citrus, date palms

Leading agricultural imports: Grains, pulses, dairy products, wood, edible oils, protein meals, tallow, cotton, tobacco, hides and skins

Agricultural imports as share of total imports: 36%

U.S. share of total agricultural imports: 28%

Percent of population in agriculture: 30%

Algeria's wine grape production decreased from 2.6 million hectoliters in 1980 to 920,000 hectoliters in 1988. Table grape production, on the other hand, has nearly doubled over the past 20 years.

Algeria's citrus production declined from a high of 480,000 tons in 1974 to a low of 253,000 tons in 1985. The Government is now attempting to reverse this trend through the planting of new or-

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production ¹		
Barley	0.82	0.56
Citrus	0.28	0.28
Forage	0.96	0.91
Melons	0.36	0.40
Potatoes	0.91	0.95
Table grapes	0.11	0.12
Tomatoes	0.29	0.31
Wheat	1.17	1.15
Wine grapes ²	0.92	0.92

	1987	1988
	<i>millions</i>	
Livestock numbers		
Cattle	0.75	0.78
Goats	2.57	2.98
Sheep	16.15	16.40

¹ Data for 1987 are supplied by the Algerian Ministry of Agriculture. Data for 1988 are estimates by U.S. agricultural trade office, Algiers.

² Thousands of hectoliters.

Value of Agricultural Imports, 1988¹

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions²</i>	
Selected products		
Corn	118	122
Oils and greases	14	174
Sugar	0	180
Wheat	200	474
Wood	20	175
Total³	629	2,211

¹ Values are estimates by the U.S. agricultural trade office, Algiers, and the Algerian Bureau of Customs.

² Values are shown in U.S. dollars at US\$1=6 dinars.

³ Includes products not listed above.

chards and producer-education programs to foster the use of more modern techniques.

Over the past 10 years, Algerian palm date production has remained constant at 200,000 tons a year. Insect infestation continues as a major problem.

Farm and food policy

A decline in oil export earnings has forced Algeria to re-orient its agricultural output from large state farms into small privately operated units. The Government hopes the new system of farm cooperatives and individually owned farms will produce more food, thereby reducing the need for imports.

Other Government economic policies which affect agricultural production include: encouraging exports by allowing exporters to keep at least 10 percent of foreign

currency revenues; giving priority to imports of essential inputs such as raw cotton and hides and skins (which are then manufactured into products for export); and providing economic incentives to farmers encouraging them to increase food production.

The Government's major agricultural goal is to decrease food imports and increase domestic food production. For 1989, other agricultural goals include developing seed varieties that are better suited to the Algerian climate; settling arable lands in the south and high plateau which will require an ambitious construction program; promoting production crops such as grains, pulses, and tomatoes; and improving productivity in the livestock sector to increase sheep, dairy, and beef cattle herds.

Imports and exports

In 1988, Algeria's food import bill of more than \$2 billion reached 25 percent of the country's total export earnings. Major agricultural import items included grains, pulses, dairy products, wood, edible oils, protein meals, tallow, cotton, tobacco, and hides and skins. The U.S. share of Algeria's total agricultural imports exceeded 25 percent—up from 13 percent in 1987 and 8 percent in 1986.

Algeria's major agricultural exports (by cash receipts) are wine, vegetables, citrus, and palm dates. After years of discouraging wine production for religious reasons, the Government now is actively promoting it as one way to increase agricultural export earnings.

Exports of fresh vegetables grew from zero in 1984 to \$4.2 million in 1988. Citrus exports increased from 815 tons in 1985 to 7,796 tons in 1987. Nearly all exports—98 percent—go to France.

Date production is important to Algerian export earnings. In 1988, the country exported 5,600 tons, falling short of its goal of exporting 8,000 tons a year.

Trade policy and prospects

With Algeria's weak foreign exchange position and its continued need to finance basic agricultural imports, Algeria will continue to depend greatly on the availability of credit financing with longer than 3-year repayment terms to finance its agricultural purchases.

In 1988, the United States remained competitive in the Algerian market through the use of the Export Enhancement Program and credit guarantee programs. The main competition is from the European Community (EC), which offers extensive subsidies.

Export opportunities for U.S. firms include wheat, barley, corn, rice, tomato paste, vegetable oils, dry edible beans, protein meals, wood products, leaf tobacco, cotton, tallow, dairy products such as cheese, powdered milk, and butter, live animals and genetic materials, and hides and skins. ●

Argentina

Profile of agriculture

With its temperate climate, Argentina produces, exports, and imports many of the same products as the United States.

Argentina is a major exporter of wheat, corn, sorghum, soybeans, oilseed byproducts, and livestock products, mostly beef and sheep. Horticultural exports include citrus and deciduous fruit.

Argentine economic policies tax the competitive agricultural export sector and subsidize the manufacturing sector which is largely closed to international trade. As a result, large supplies of domestically produced food are available to Argentina's 32 million citizens who consume a diet rich in protein and low in cost. Food imports are relatively small.

Production highlights

Argentina's farmers suffered through a severe drought in 1988 which continued into early 1989. Production of major crops in 1988 was the lowest in 15 years.

Plantings of the five major crops—wheat, corn, sorghum,

soybeans, and sunflowerseed—remained constant in 1988/89. Substantial increases for oilseeds offset declines for grain. Growth in area of oilseeds, especially soybeans, is expected to continue as long as world soybean prices remain strong compared to corn.

The drought also took its toll on the cattle industry in 1988/89. Parched pastures forced a larger-than-expected number of cattle to market in the second half of 1988. However, in 1988 total slaughter was down 5 percent due to a big drop in the first half of the year. All indications suggest that the herd liquidation will continue, although probably with reduced intensity. There are no signs of herd rebuilding because increased economic uncertainty and instability are not conducive to investment in the cattle industry.

Profit margins for pork and poultry producers were squeezed because of higher feed ingredient costs, low prices of beef, and reduced consumer demand as a result of the drop in disposable income. Dairy producers and milk production were perhaps hardest hit as forage supplies withered during the drought. Meanwhile milk producer associations continue to struggle with the Government and industry over the level of milk prices and payment terms.

Farm and food policy

In August 1988, the Government imposed what producers considered overvalued exchange rates on agricultural exports to generate federal revenue and to hold down inflation. Producer groups called the policy a disguised export tax. The new exchange rates prevented producers from taking advantage of strong world prices and sparked a bitter reaction from producers who threatened to lower spring plantings.

In February 1989, the Government responded with two minor ad-



Argentina at a Glance

Population (1988): 31.5 million

Urban population: 27.1 million

Population growth rate: 1.2%

Per capita income (1988):

\$2,400 (estimate)

Arable land area: 246,000 square kilometers or 24.6 million hectares

Major crops: Corn, sorghum, soybeans, sunflowerseed, wheat

Livestock sector: Beef and dairy cattle, hogs, poultry

Leading agricultural exports:

Oilseeds and oilseed products, grains, beef, animal products, tobacco

Leading agricultural imports:

Coffee, wood, cotton, fruit, cocoa

Agricultural imports as share of total imports: 6.9%

U.S. share of total agricultural imports: 9.4%

Percent of population in agriculture: 12%

justments in exchange rates to provide some relief on exports, but the agricultural community remained at odds with the Government and staged a farm strike in March. In the meantime, the Government was running short of funds and the international lending community was less

Agricultural Production

	1987/88	1988/89
	<i>mil. metric tons</i>	
Crop production		
Corn	9.0	4.8
Grain sorghum	3.0	1.6
Soybeans	9.9	7.3
Sunflowerseed	2.8	2.9
Wheat	8.8	7.6

	1988	1989
	<i>million head</i>	
Livestock numbers		
Cattle	50.8	50.5
Sheep	29.2	29.5
Swine	2.5	2.4
Horses	2.9	2.8

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Cocoa	0.13	35.00
Coffee	0.00	71.68
Cotton	10.79	41.52
Dairy products	0.43	10.16
Meat	0.82	18.74
Vegetables	0.18	11.88
Wood	2.00	46.88
Total²	38.24	403.50

¹ Values are shown in U.S. dollars at US\$1=3.503 australes.

² Includes products not listed above.

semen, seeds, and high-value products continued to account for the lion's share of U.S. exports.

Argentine exports of agricultural products recovered substantially in 1988, reaching \$5.6 billion compared with \$4.2 billion in 1987. However, exports remained below the records set in the early 1980's.

Grains and oilseeds and products accounted for the improved performance in 1988. The value of oilseed exports in 1988 was more than 2-1/2 times the value of grain exports. Exports of most high-value products also increased, while exports of meats and products declined and the value of fruit exports was unchanged.

The European Community (EC) emerged as Argentina's principal market for grains, oilseeds, and oilseed meals in 1988, reflecting large shipments of soybean meal to feed compounders in the Netherlands. Exports to the Soviet Union declined, despite an increase in exports of soybean meal.

Argentina's exports to the United States continued their upward trend in 1988. The total value reached \$430 million compared with \$380 million in 1987. Leading export commodities included oats, soybean oil, hides and skins, wool, fruits, vegetables, and cheese. These increases more than compensated for declines for tobacco products, beef, and sugar.

Export prospects for 1989 have been scaled back because of the drought. Although prices are stronger as a result of tight world supplies, reduced production suggests that export value will not match the 1988 level.

Trade policy and prospects

Argentina is closely watching the 1992 integration plan of the European Community (EC). In an effort to head off possible EC action to

close off its beef market to Argentina, the Argentine Government announced that it will eradicate foot-and-mouth disease in 3 years. This initiative will be financed with \$45 million from the National Meat Board and \$50 million from the InterAmerican Bank for Development. The Government announced that it will work with Uruguay and Brazil to eliminate the disease.

The Government continues to talk about its bilateral accord with Brazil. In fact, it has allocated more than 1 million tons of wheat to Brazil (the agreement amount was 1.55 million tons) out of a limited export supply. It has also aggressively pursued markets in Peru, Venezuela, Colombia, Chile, Bolivia, and Cuba, in addition to sales in China and the Soviet Union.

Argentina is an active member of the Cairns Group in the Uruguay Round of the multilateral trade talks. The Cairns Group is a coalition of agricultural trading countries which are working together to present a common position in the Uruguay Round.

U.S. export prospects continue to be in the areas of breeding livestock and poultry, semen, and seed. Argentine interest in USDA's credit programs has increased and may help U.S. exporters increase sales to the Argentine market. ●

willing to extend new loans to Argentina.

In May 1989, the Government returned to firmly controlled exchange rate policies accompanied by high export taxes (30 to 50 percent) on agricultural exports. Farmer unrest, as well as general social unrest, continued as the economic situation deteriorated.

Imports and exports

Argentine imports of agricultural products rose modestly in 1988, reaching about \$450 million. Major imports included coffee, wood products, cotton, fruits, and cocoa.

After advancing sharply for several years, imports from the United States declined in 1988 to \$27.4 million, compared with \$38.2 million in 1987. Cotton and products accounted for most of the decline. Imports of almonds and hops also dropped due to weak demand. Breeding livestock and poultry,

Australia

Profile of agriculture

Most Australian farms raise both wheat and sheep or beef cattle, or all three. About 6 percent of the Australian labor force works on farms.

Wool is Australia's top agricultural product by value, followed by beef. Wheat is the major crop raised. Australia also has a large dairy industry. Coarse grains, poultry, hogs, sugar, fruits, cotton, and vegetables are other important industries.

Exports account for two-thirds of the value of agricultural output. Australia is the world's sixth largest agricultural exporter.

Production highlights

Australian agriculture enjoyed its second year of continued strong growth in 1988. The value of production increased 9 percent and farm export values increased 11 percent.

Agricultural Production

	1986/87	1987/88 ¹
	<i>mil. metric tons</i>	
Crop production		
Apples	0.4	0.3
Barley	3.6	3.5
Citrus	0.6	0.6
Oats	1.6	1.7
Pears	0.1	0.2
Rice	0.6	0.8
Sorghum	1.4	1.4
Sugar	3.4	3.4
Wheat	16.8	12.4

	1986/87	1987/88 ¹
	<i>millions</i>	
Livestock slaughtered		
Cattle	7.92	8.06
Hogs	4.73	4.77
Sheep	14.55	14.84

¹ Years end as of March 31. Data for 1987/88 are preliminary.

¹ Years end as of March 31. Data for 1987/88 are preliminary.

Wool production is projected to increase at about 3 percent a year to reach over 1 million tons by 1993/94. High wool prices are likely to mean lower production of lamb. A forecast 10-percent drop in lamb supplies for 1989 reflects the movement away from lamb production toward the more profitable wool.

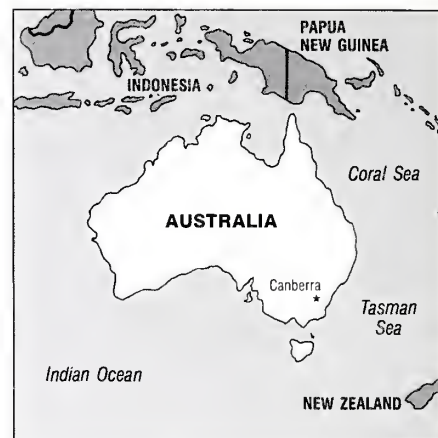
The Australian cattle herd was forecast to remain stable at about 23 million head in 1989. Beef production is expected to decline until 1990 as producers rebuild herds. In subsequent years, beef production is projected to increase so that by 1993, production is expected to be about 14 percent more than 1988.

Pork production is expected to fall during 1989. However, by 1993, production is projected to reach 335,000 tons, more than 17 percent above 1988.

Improved returns from the domestic and international markets are expected to lead to higher Australian milk production through the early 1990's. Milk production was forecast to rise by 2 percent in 1988/89 to 6.25 billion liters.

Prospects for wheat growers appear good through 1990/91. Changes in the structure of the Australian wheat industry may increase production in the medium term. However, the more positive outlook for wool and beef sales may cause producers to shift away from wheat production. Consequently, wheat production is forecast at 13.3 million tons in 1988/89, up slightly from the 1987/88 figure of 12.4 million tons, but considerably lower than the 16.8 million tons produced in 1986/87.

Australian production of coarse grains in 1993/94 is projected to be 3.5 million tons for barley, 1.85 million tons for oats, and 1.7 million tons for sorghum—about the same as forecast for 1988/89. High wool prices and improved beef prices should provide little incentive for farmers to increase production of coarse grains.



Australia at a Glance

Population (1988): 16.2 million
Urban population: 13.9 million
Population growth rate: 1.2%
Per capita income (1987): \$12,190
Arable land area: 461,211 square kilometers
Major crops: Wheat, barley, oats, sorghum, rice, apples, pears, cotton, sugar, oilseeds, citrus
Livestock sector: Sheep, beef and dairy cattle, hogs, poultry
Leading agricultural exports: Wool, wheat, beef, barley, sugar, rice, cotton
Leading agricultural imports: Tobacco, nuts, forest products
Agricultural imports as share of total imports: 5.6%
U.S. share of total agricultural imports: 12.0%
Percent of workforce in agriculture: 6%

With the prospect of lower returns, rice plantings are expected to fall in 1988/89. In the medium term, rice plantings are likely to fall marginally. Production in 1993/94 is projected to be 710,000 tons, compared with 762,000 tons in 1987/88 and an estimated 730,000 tons in 1988/89.

Continued varietal improvement is expected to contribute to increasing cotton yields which are projected to result in production of about 340,000 tons by 1993/94.

Sugarcane production was expected to be a record 28 million tons in 1989, 2.3 million tons higher than 1988. Sugar production in

Value of Agricultural Imports, July-June 1986/87

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Fish products	0.4	95
Forest products	55.1	212
Horses	0	79
Leather and furskins	1.2	105
Tobacco	35.0	82
Whiskey	15.2	56
Total²	203.0	1,692

¹ Values are shown in U.S. dollars at US\$1=1.40 Australian dollars.

² Includes products not listed above.

1988/89 was forecast to reach a record 3.69 million tons. Government liberalization and improved world prices account for the increase.

Hot, dry weather reduced winter oilseed production 11 percent to 87,000 tons in 1988/89. Soybean production was expected to increase 62,000 tons to 127,000 tons in 1988/89.

Higher 1989 "on" year yields and increased numbers of bearing trees are expected to result in the largest apple harvest since 1973. Production was forecast at 386,000 tons in 1989, 19 percent above 1988. The output of pears was expected to fall to about 128,000 tons in 1989, compared to 150,000 tons in 1988. The decline is attributed to a decline in yields as a mild winter hurt pollination and resulted in greater-than-normal pest and disease problems.

Farm and food policy

Australian agriculture is one of the most regulated in the world. Marketing boards monopolize domestic and overseas marketing for

most commodities. However, the government's consistent approach during the past 5 years has been to make Australian agriculture more market-oriented. Progress has been slow, but steady.

Imports and exports

Australia imported nearly \$1.7 billion worth of agricultural products in 1986/87, up from \$1.5 billion in 1985/86. Major imports included forest products, \$212 million; leather and furskins, \$105 million; fish products, \$95 million; tobacco, \$82 million; and horses, \$79 million.

Australia imported \$203 million worth of agricultural products from the United States. Imports included forest products, \$55 million; tobacco, \$35 million; whiskey, \$15 million; and seeds, \$12 million.

In 1988/89, Australian exports are forecast at \$15.5 billion. Wool, grain, and beef account for two-thirds of the value of agricultural exports. About four-fifths of the wheat and barley produced is exported, as is almost three-fourths of sugar, rice, and cotton. Half of beef production and nearly all wool production is exported. Australia is the world's third largest wheat exporter, the largest beef and wool exporter, and a major supplier of rice, coarse grains, cotton, and sugar.

Demand for Australian lamb is expected to remain strong in most markets due to reduced competition from other meats, particularly beef, and from New Zealand mutton.

The export outlook for beef is excellent because of a boost in demand and historically low cattle numbers in the Pacific Basin. Beef exports are expected to reach 653,000 tons (shipped weight) by 1992, up 20 percent from the 1987 volume.

Much of Australia's coarse grain production will continue to be exported. In addition, 75-80 percent of Australia's rice production will be exported.

Exports of apples are not expected to change significantly in 1989. Exports of fresh pears are expected to fall by about 14 percent in 1989 to 30,000 tons, with strong competition from other Southern Hemisphere exporters.

Exports of agricultural products to the United States in 1987/1988 reached \$1.5 billion, about 11 percent of Australia's agricultural exports. Exports of red meat, at \$974 million, accounted for nearly two-thirds of Australian agricultural exports to the United States. Other exports to the United States included wool, fish, fruits, vegetables, beverages, and dairy products.

Trade policy and prospects

A wide range of imports are prohibited or severely limited by strict plant or animal health regulations. Livestock imports are limited to breeding animals and there are practically no meat imports. Plant quarantine regulations keep out many U.S. horticultural products, such as apples, pears, and avocados.

In 1988, the Government ended its long-standing embargo on sugar imports (although it was replaced with tariffs), and the phasing out over time of a local content requirement for tobacco products.

Internationally, Australia has continued to play a major role in the ongoing multilateral negotiations on agricultural trade reform. Australia is an active member of the Cairns Group in the Uruguay Round of the multilateral trade talks. The Cairns Group is a coalition of agricultural trading countries which are working together to present a common position in the Uruguay Round.

Market opportunities exist for a variety of processed food products, not bulk commodities. In addition, growth opportunities also exist for tobacco, hardwood products, and genetic material for cattle.

Improvements in Australian tariff and quarantine levels will increase export opportunities for U.S. producers. ●

Austria

Profile of agriculture

Austrian farms, like those of other mountainous West European countries, are small and fragmented, and their products are relatively expensive. Austrian farmers provide about 80 percent of domestic food requirements.

Dairy products, cattle, and grains are the three major commodities produced, although Austria also grows a wide range of other temperate climate crops.

Austrian agriculture is characterized by a large proportion of part-time farmers; over half of all farms operate part time. Agriculture and forestry account for 3 to 4 percent of Austria's gross domestic product.

Production highlights

Dairy farming and the production of breeding cattle are carried out mainly in the alpine and pre-

alpine areas. Cattle fattening is largely found in the pre-alpine regions and the lowlands where corn for silage and grain is grown.

The Simmental breed accounts for 80 percent of Austrian cattle. In 1987, about 693,000 slaughter cattle and 185,000 calves were produced. While most of the veal was consumed domestically, one-third of the slaughtered cattle were exported, mainly as meat.

Although dairy cattle numbers are declining, milk output continues to rise. However, about a third of total milk production moves into feed channels. The Government tries to keep deliveries to dairies low through a quota system.

Austria's grain belt is the region around Vienna. Until the mid-1970's, relatively large imports were necessary. However, a slight area increase and a rapid rise in yields pushed production up to 5.3 million tons in 1988, with exports of about 1.2 million tons. Practically all goes to East European countries. Reduced fertilizer application due to a fertilizer tax has not slowed the rising yields.

Sugar beet production, which totaled 2.1 million tons in 1988, is made on a contract basis. In periods when prospects for sugar prices are good, sugar mills contract larger areas for sugar exports.

Since Austria has a deficit in oilmeals and vegetable oils, the production of oilseeds is expanding at the expense of grain. In 1988, rapeseed and sunflowerseed production reached 86,000 and 56,000 tons, respectively. In late June 1989, a new oil mill went into operation.

Apples are the main fruit produced in Austria. The 1988 output was 295,000 tons of which 87 percent was fall/winter apples, particularly gold delicious. In addition, large volumes of cider apples are produced and processed into apple juice. While domestic



Austria at a Glance

Population (1988): 7.6 million

Urban population: 4.9 million

Population growth rate: 0.1%

Per capita income (1985): \$8,750

Arable land area: 1.4 million hectares

Major crops: Grains, fruits, vegetables

Livestock sector: Dairy and beef cattle, hogs, poultry

Leading agricultural exports: Fresh and frozen beef, cheese, fruit juice, live cattle, bread and biscuits, chocolate products, dry milk, hides and skins, wheat, nonalcoholic beverages, corn, coffee, beer

Leading agricultural imports: Forest products, fruits, vegetables, coffee, tea, spices, oilseed cake and meal

Agricultural imports as share of total imports: 8.6%

U.S. share of total agricultural imports: 3.2%

Percent of population in agriculture: 8.1%

apple production is more than sufficient, pear production (54,000 tons) only meets the requirements up to Christmas. Later, imports come in from Mediterranean and Southern Hemisphere countries.

After several years of low wine production, 1987 output reached 3.4 million hectoliters—23 percent above the 10-year average.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production ¹		
Apples	0.21	0.30
Barley	1.18	1.36
Corn	1.68	1.70
Rapeseed	0.06	0.09
Pears	0.03	0.05
Sugar beets	1.13	2.06
Sunflowerseed	0.04	0.06
Wheat	1.56	1.45

	1987	1988
	<i>millions</i>	
Livestock numbers ²		
Beef cattle	0.35	0.33
Dairy cows	0.96	0.95
Hogs	3.95	3.87
Poultry	15.01	14.14
Sheep	0.26	0.26

¹ Crop production denotes year harvested.

² Estimates as of December each year.

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Coffee, tea, cocoa, spices	0	360.5
Feeds, miscellaneous	12.0	177.0
Forest products	13.4	490.7
Fruits and products	19.6	467.8
Grains and products	9.3	123.0
Vegetables and products	2.2	148.0
Total²	90.2	2,812.3

¹ Values are shown in U.S. dollars at US\$1=12.64 schillings.

² Includes products not listed above.

Farm and food policy

Agricultural policy emphasizes self-sufficiency. Price supports for grains and dairy products have resulted in surplus production.

Austrian policy attempts to reduce production of dairy products and grains which are in surplus by buying up milk production quotas and encouraging alternative crops, especially oilseeds.

Producer prices are set for a number of basic commodities, but price controls also apply at the wholesale and retail level for several products.

A shift to a more market-oriented system seems unlikely since Austria has a large proportion of small mountain farms, with many in the economically weak area at the eastern border.

Crop production is planned through a system of price checkoffs, production controls, and subsidies. Agriculture officials are encouraging producers to reduce grain plantings and switch to oilseeds.

Austrian livestock policy discourages large-scale production. However, even with restrictions, overproduction of beef and pork remains a problem.

The Government introduced new regulations to make Austrian dairy products more price competitive with other European producers. The regulations permit more independent actions by dairies. While some regulations will not have any impact until the 1990's, many dairies are already improving their efficiency by merging, reducing overcapacity, and closing obsolete facilities to reduce production costs.

Imports and exports

The European Community (EC) is Austria's major trading partner. Austria also maintains close relations with Eastern Europe, often subsidizing sales of surplus commodities to that area.

Austria is a net importer of agricultural products, buying \$2.8 billion worth in 1987. Major imports included forest products, \$490.7 million; fruit and fruit products, \$467.8 million; coffee, tea, cocoa, and spices, \$360.5 million; feeds—mainly oil meals, \$177.0 million; vegetables and products, \$148 million; and grains and products, \$123.0 million.

U.S. exports to Austria in 1987 totaled \$90.2 million. The principal exports were beef and veal, \$9.5 million; nonfat dry milk, \$5.6 million; tobacco, \$8 million; and fresh/dried fruit, \$16.3 million.

Austrian agricultural exports totaled \$1.9 billion in 1987. Principal exports were fresh and frozen beef, \$139 million; cheese, \$108 million;

fruit juice, \$75 million; live cattle, \$72 million; bread and biscuits, \$68 million; chocolate products, \$49 million; dry milk, \$42 million; hides and skins, \$41 million; wheat, \$40 million; corn, \$34 million; nonalcoholic beverages, \$33 million; coffee, \$27 million; and beer, \$16 million.

Major exports to the United States in 1987 included dairy products, \$21.6 million; fruit and fruit products, \$20.4 million; sugar and products, \$4 million; grains and products, \$3 million; coffee, tea, cocoa, and spices, \$2.8 million; and beverages, \$1.3 million.

Trade policy and prospects

There is some interest within Austria to join the EC. However, some members in the agricultural community are concerned that membership would hurt Austria's small family farmers.

Despite Austrian tariffs, market opportunities exist for U.S. almond, raisin, and kiwifruit producers. U.S. rice producers also may find opportunities. Broiler and turkey imports require import licenses and face levies, but opportunities exist for U.S. producers. ●

Bangladesh

Profile of agriculture

Agriculture is the single most important sector of the Bangladesh economy, accounting for almost 50 percent of the gross domestic product (GDP) and employing around 75 percent of the population. Most production comes from small-scale family farms operating at or near the subsistence level.

This poor, densely populated country has fertile soil, but suffers from periodic floods and droughts. The fast-growing population and the irregular monsoon cycles are the two major challenges facing agriculture.

Primary crops are rice, jute, tea, wheat, sugarcane, tobacco, and potatoes.

The livestock sector contributes about 6 percent to the GDP and provides direct or indirect employment for about 20 percent of the population. Hide and skin exports earn about 11 percent of the country's total foreign exchange earnings. Virtually every farm family has one or more head of cattle and a few

chickens, but development of an organized livestock and poultry feed industry is limited.

Production highlights

Aggregate farm production, in current market prices, was valued at \$7.51 billion in 1987/88 (July-June), up from \$7.05 billion in 1986/87. This represents a growth rate of less than 1 percent, compared with 3.1 percent in 1986/87. Slower growth reflected crop damage caused by severe floods in 1987.

Weather problems were worse in 1988. Agriculture and industry both suffered from unprecedented flooding that affected three-fourths of the country from mid-July to September. However, growth for the agricultural sector is estimated at around 1 percent for 1988/89, a slight improvement that partly reflects the Government's flood rehabilitation programs.

For assistance with its flood-recovery efforts, the Government negotiated an emergency loan from the International Monetary Fund in November 1988 for nearly \$1 billion. There were also foreign aid disbursements of around \$1.6 billion from multilateral development banks and individual countries such as Australia, Canada, Japan, the United Kingdom, the United States, and West Germany.

U.S. bilateral assistance in fiscal year 1989 is expected to exceed the \$132 million provided in fiscal 1988.

Rice production in 1988/89 is estimated at 15.35 million metric tons, compared with the 1987/88 harvest of 15.41 million. Wheat production decreased 20 percent to about 840,000 tons. Oilseeds are generally grown as a fill-in between rice crops. Rapeseed production



Bangladesh at a Glance

Population (1988): 106.6 million

Urban population: Est. 17 million

Population growth rate: 2.6%

Per capita income (1988): \$150

Major crops: Rice, jute, tea

Livestock sector: Most farms have a few cattle and chickens; no developed livestock industry

Leading agricultural exports: Jute, tea, shrimp, frog legs, leather and hides

Leading agricultural imports: Wheat, rice, oilseeds, cotton, fertilizer

Agricultural imports as share of total imports: 20%

U.S. share of total agricultural imports (FY 1988): 28%

Percent of population in agriculture: 75%

represents more than 90 percent of the domestic oilseed harvest.

World jute production is dominated by three countries—India, Bangladesh, and China. Bangladesh has taken the lead in pushing for support for the declining jute industry by emphasizing jute's biodegradability compared with synthetic fibers and the importance of diversifying jute products and markets.

Crop Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Jute	0.97	0.85
Oilseeds	0.15	0.17
Potatoes	1.07	1.20
Pulses	0.16	0.17
Rice	15.41	15.41
Sugarcane	7.00	7.55
Sweet potatoes	0.71	0.58
Tea	0.04	0.04
Tobacco	0.04	0.04
Wheat	1.09	1.05

One goal of Bangladesh and the other major jute producers is price stabilization, which many consuming countries, including the United States, do not support.

The number of cattle totaled 21.5 million head, according to the latest livestock survey conducted in 1984. The Government operates model livestock and poultry farms to improve local breeds and provide training and extension services to farmers.

Farm and food policy

The Government's goal is to achieve self-sufficiency in food grain (rice and wheat) production by 1992. Sizable resources have been allocated to improving irrigation, expanding the use of high-yielding seed varieties, and increasing the availability of fertilizer, credit, and other inputs.

Nevertheless, growth in production has not reached the annual 5.2-percent target set in the current 5-year plan. In recent years, the major problem has been the inability to control flooding. To offset losses, the Government started a flood rehabilitation program, which proved fairly successful in 1987/88 and 1988/89.

Although the Government plans to continue price supports for food grains and some cash crops in the short term, the objective is to eventually eliminate most agricultural and food subsidies. The Government procures food grains at support prices to build up stocks and then releases stocks when supplies are low.

Imports and exports

Wheat imports exceeded 2 million tons in 1988/89, but were down from 1987/88's 2.3 million. Most of the wheat was obtained on concessional terms from various

donors, such as U.S. wheat received under Public Law 480, the Food for Peace program. Total commercial purchases, at 512,000 tons in 1988/89, dropped about 30 percent.

Edible oil imports climbed to a record 452,000 tons in 1987/88, including 325,000 tons of soybean oil and the remainder palm oil. Bangladesh imported most of its soybean oil from the European Community, Malaysia, and Brazil. U.S. soybean oil has been more expensive than oil from those areas, so U.S. exports have been limited to concessional sales under P.L. 480.

Bangladesh produces only a small quantity of cotton. Total production in 1987/88 provided less than 15 percent of overall cotton use. To meet the growing demand, cotton imports in 1987/88 hit a record 53,000 tons. The United States was the largest supplier, with almost a 50-percent share of the market. Other major suppliers were Pakistan, Sudan, the Soviet Union, India, and China.

Tobacco imports are limited to a few thousand tons per year of superior quality flue-cured tobacco used for blending in the production of premium-brand cigarettes. While cigarette imports have been banned since 1984, an estimated 300-400 million premium foreign cigarettes enter Bangladesh illegally.

The country produces about 900,000 tons of milk per year, far short of its estimated requirement of 5 million tons. The shortfall results in large imports of powdered milk coming mainly from New Zealand, Australia, and the Netherlands.

Bangladesh is a surplus producer of nitrogen fertilizer, but remains a net importer of phosphates and potash. To meet demand, Bangladesh imported 276,637 tons of phosphate and potash in 1987/88.

Jute export volume dropped by 40 percent in 1987/88, while tea exports increased by 29 percent.

The overall trade balance in 1987/88 was negative, with a deficit of \$1.8 billion. The balance of payments, however, was positive. The surplus of \$158 million was mainly the result of increased foreign aid and greater remittances by Bangladeshis working in other countries.

Trade policy and prospects

Bangladesh's current import policy is designed to improve the availability of raw materials for the industrial sector, and to maintain supplies and prices of essential food commodities for public consumption. Agricultural commodity imports—primarily food grains, edible oil, and cotton—accounted for 20 percent of total imports in 1988/89.

Food grains, soybean oil, and cotton are the principal U.S. agricultural exports to Bangladesh.

In U.S. fiscal year 1988, the United States sold 200,000 metric tons of wheat to Bangladesh under the Export Enhancement Program (EEP), with intermediate credit guarantees. Another 419,000 tons of wheat was sold under the P.L. 480 "food for development" provisions, which offer long-term, low-interest credit along with forgiveness of debt if the recipient country achieves certain agreed-upon developmental goals.

In fiscal 1989, \$80 million was allocated under P.L. 480 for wheat and rice, cotton, and vegetable oil. The United States also offered 400,000 tons of wheat for purchase under the EEP.

Bangladesh's major exports to the United States are garments, jute products, frozen shrimp, and frog legs. ●

Belgium-Luxembourg

B

Profile of agriculture

Agriculture accounted for about 2 percent of Belgium's gross national product in 1988. There has been a long-term downtrend in the size of the farm workforce and use of land for agriculture. There are only 91,600 farmers in Belgium now, or less than half the number in 1970. Of these 70 percent are full-time and account for all but a marginal portion of total production. Average farm size is 14.89 hectares.

Important sectors are pork, beef and veal, dairy, fresh vegetables, and sugar beets.

The agricultural situation in Luxembourg is similar to that in Belgium. Agriculture's contribution to the gross national product has dropped to 2.6 percent and the number of farms over 2 hectares to 3,524. The average farm size is 30.4 hectares. The total active population in the agriculture sector amounted to 3.8 percent in 1988 with another 1.7 percent in the food industry. Full-time workers account for only 55

percent of the total agricultural labor force.

Luxembourg's agriculture is mainly dairy-oriented, with milk representing more than half of the total gross value of farm production. Beef, grain, and wine production are its other main segments, in decreasing order of importance.

Production highlights

The total value of Belgian agricultural production increased 1 percent in 1988 after a 5-percent drop in 1987. Winter wheat was the leading and most profitable cereal crop. The sugar beet crop was large and high in sugar content. The value of potato production was up 30 percent because of better quality. The level of horticultural production was unchanged in 1988, although there were some changes in the contribution of some crops to the total. Output rose for fresh vegetables and vegetables for processing, but the value of hothouse vegetable output, mainly tomatoes and lettuce, dropped 8 to 9 percent. Fruit production value, which is dominated by the apple sector, increased by 4 percent.

Livestock production was stable at the reduced 1987 level. Milk production decreased by 4 percent as the result of quotas imposed by the European Community (of which Belgium and Luxembourg are both original members). Surplus dairy cows are being replaced by beef cows. Production of White-Blue cattle, a genetically improved beef breed, has expanded very quickly due to its strong competitiveness on the European market.

Poultry meat production continued to expand because of its profitability, and is likely to expand another 2 percent in 1989. Egg production, which was down 6 percent in 1988, will continue to decline.

Other significant developments in the livestock sector were an increase of 25 percent in lamb and



Belgium at a Glance

Population (1988): 9.9 million

Population growth rate: 0.0%

Per capita income (1988): \$14,375

Arable land area: 1.4 million hectares

Major crops: Grains, sugar beets, flax, tobacco, potatoes, other vegetables, fruits

Livestock sector: Livestock, dairy, poultry

Leading agricultural exports: Animals and animal food products, oilseeds, seeds, fodders, grains, and preparations

Leading agricultural imports: Animals and animal food products, oilseeds, grains, and preparations

Agricultural imports as share of total imports: 10.3%

U.S. share of total agricultural imports: 5.5%

Percent of population in agriculture: 2.34%

Luxembourg at a Glance

Population (1988): 0.372 million

Urban population: 0.165 million

Population growth rate: 0.0%

Per capita income (1988): \$18,000

Arable land area: 0.056 million hectares

Major crops: Wine grapes, grains, forages

Livestock sector: Dairying

Leading agricultural exports:

Animals, animal products, wine

Leading agricultural imports:

Animals, animal products, wine

Agricultural imports as share of total imports: 11.9%

U.S. share of total agricultural imports: About 5%

Percent of population in agriculture: 5%

mutton prices which resulted in production value increases of 15 percent. Further expansion of sheep production and other livestock products such as game meat and poultry are likely in the next few years, although the economic importance of this production will remain marginal.

In 1988, the value of Luxembourg's agricultural output rose a little more than 1 percent from the year before. Both cereal and grape yields were up. Wine quality was excellent. After a sharp drop in 1987,

Belgium-Luxembourg Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Animals and products		
Food products	75	2,290
Nonfood products	3	501
Crop food products		
Fats and oils	14	365
Fruits and nuts	13	589
Vegetables	3	539
Canned fruit and vegetables	3	435
Other	8	1,181
Grains	65	1,600
Corn	2	357
Grain sorghum	0	21
Rice	43	76
Wheat	10	363
Other	10	782
Oilseeds	248	1,689
Soybeans	187	368
Soybean meal	2	196
Other	59	1,124
Cotton	9	59
Tobacco	17	268
Other nonfood prod.	2	324
Total	459	9,844

¹ Values are shown in U.S. dollars at US\$1=36.90 Belgian francs

the value of Luxembourg's livestock output rose slightly in 1988, led by higher values for beef. Beef prices increased by 3 percent and production volume by nearly 4 percent. Pork production value dropped by nearly 5 percent due to lower prices. The value of milk production declined slightly as production decreases more than offset higher prices.

The trend toward specialization in milk and bovine meat production, begun about 20 years ago, likely will continue over the next few years with a further decrease in pork production likely.

Farm and food policy

Belgian agricultural policy is mainly determined by the European Community's common agricultural policy. Farmers get the bulk of their financial support through the EC price support system for commodities. The Belgian Government spends relatively small amounts of its budget on agriculture and is not willing to allocate large sums to direct income aids for farmers.

In Luxembourg, the agriculture sector's political and social importance is greater than its contribution to the country's gross national product, workforce statistics, and the number of farms might suggest. Consequently, Luxembourg provides additional national support to its farmers by such means as grants for projects designed to cut production costs, payments to farmers abandoning milk production, partial rebate of excise taxes on tractor fuel, grants for farmers' health, accident and pension funds, grants for export promotion and consumption programs, grants or subsidies for a wide range of agricultural organizations, and grants to individuals who attend agricultural schools.

Imports and exports

As members of the EC-12, the greater part of Belgium and Luxembourg's trade is with other EC members. France, the Netherlands, and West Germany account for 27, 24, and 16 percent of trade, respectively. Agricultural imports from non-EC countries account for 30 percent of total imports, while exports to non-EC countries account for 20 percent of total exports.

The Belgium-Luxembourg market is an important one for U.S. farm products. The United States

accounts for slightly more than 4 percent of Belgium-Luxembourg's total agricultural imports.

In 1988, U.S. agricultural sales to Belgium-Luxembourg amounted to \$408 million, down 9 percent from the year before as exports of bulk commodities declined.

Soybean exports remained the single largest export item but dropped by more than one-third to 587,000 metric tons. Corn exports were down by more than half to \$16 million and cotton sales slipped by roughly one-third. Gains for long-grain rice, flue-cured tobacco, and grapefruit were not enough to offset these losses.

U.S. exports in 1989 will likely drop substantially as soybean exports will continue at lower levels than in previous years. The ban on imports of livestock items produced with growth hormones likely will cut out another \$6 million in trade value in 1989. Exports of fruits and vegetables and an expected recovery in cotton exports will only partially compensate for these losses.

Belgian exports to the United States declined from \$96 million in 1987 to an estimated \$91 million in 1988, largely because of decreases in apple juice transshipments from Poland and smaller sales of livestock products (mostly pork) and fruits and vegetables (especially endives and canned carrots). Unsweetened chocolate exports increased from \$9 to \$13 million.

Trade policy and prospects

The agricultural policy of Belgium and Luxembourg is inextricably part of the Common Agricultural Policy of the European Community (EC). Belgian subsidies, marketing arrangements, tariffs, levies, special trade concessions, export subsidies and trade barriers, follow EC rules. ●

Bolivia

Profile of agriculture

Landlocked Bolivia is bounded by Brazil, Paraguay, Argentina, Chile, and Peru. Bolivia is one of the poorest countries in South America, with a chronic shortage of food. Its principal traditional crops are corn, potatoes, and sugarcane. Soybean production has risen significantly in recent years. Cattle raising is the principal livestock enterprise.

Agriculture provides 20 percent of the gross domestic product; however, Bolivia's agricultural production has been able to meet only about 80 percent of the nutritional needs of the population. Bolivia depends on wheat imports to partially fill the food gap.

Bolivia has two basic agricultural climates: the mountainous climate favorable for corn and potatoes and the sub-tropical climate in the interior favorable for sugarcane, rice, and soybeans. Nearly 60 percent of Bolivia's agricultural production is in the Santa Cruz area east of the Andes mountains.

Production highlights

Agricultural production declined by 1 percent in 1988, the third consecutive year of decline. For 1989, agricultural production is expected to increase 2 to 3 percent because of more favorable weather in the Santa Cruz region following an extended drought in 1988.

Coffee production for 1988/89 is expected to increase. Since 1980, Bolivia has had a program to plant new coffee varieties which promise higher yields per hectare. In addition, a coca substitution program in effect for several years has helped increase the national average coffee yield.

Wheat production dropped in 1988 due to the drought. Production totaled 58,000 tons compared to 65,800 tons in 1987. For 1989, yields should be up due to better prices and improved soil moisture conditions.

Rice production is forecast to drop in 1989 because farmers are finding it more profitable to plant other crops. Producers, mostly small farmers, blame the problem on the lack of a coherent Government rice policy. Rice production in 1988 was 140,000 tons, compared to 130,000 tons in 1987.



Bolivia at a Glance

Population (1988): 6.9 million

Urban population: 2.6 million

Population growth rate: 2.0%

Per capita income (1988): \$660

Arable land area: 297,000 square kilometers

Major crops: Potatoes, corn, rice, sugarcane, yucca, bananas, coffee, soybeans

Livestock sector: beef cattle, poultry

Leading agricultural exports:

Coffee, sugar, soybeans, leather

Leading agricultural imports:

Wheat, wheat flour

Percent of population in agriculture: 50%

Corn production is expected to fall in 1989 from the relatively high level of 1988. Corn production in 1988 was 525,000 tons compared to 430,000 tons in 1987. The attractiveness of soybeans for 1989 drew a significant amount of land out of corn production. Sorghum production, while small compared with corn, should remain relatively stable.

With higher prices for soybeans during 1988, soybean production is expected to increase sharply in 1989.

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Barley	67	75
Corn	430	525
Potatoes	598	775
Rice	130	140
Soybeans	76	158
Sugar	174	162

Livestock numbers

	1987
	<i>thousands</i>
Cattle	5,380
Sheep	8,440
Hogs	1,690

Surveys in the Santa Cruz region, which produces 95 percent of the crop, indicated between 100-110,000 hectares were planted, up from 60,000 in 1988. The larger soybean plantings were encouraged by attractive prices and greater credit availability. Soybean processors provided financing for about half of the area seeded.

Soybean production in 1988 totaled 158,000 tons compared to 76,000 tons in 1987.

Sugar production is expected to continue to decline in 1989. In 1988, sugar production totaled 162,700 tons compared to 173,500 tons in 1987. The 1988 drought in Santa Cruz, the largest sugar-producing region, reduced overall production.

The sugar market in Bolivia is tightly controlled by the Government and industry. Despite the smaller sugar output, 1988 production still exceeded domestic and export demand and stocks of sugar remain high.

Potato production is forecast to drop in 1989. Lack of credit is a problem and it is dry in major producing areas. The result could be higher prices for potatoes and possibly some shift in consumer demand to substitute staples such as rice and wheat products. Potato production in 1988 totaled 775,000 tons, compared to 598,000 in 1987.

The Bolivian livestock sector went through a difficult period in 1988. The drought hit nearly all the cattle production areas. Losses of between 5 to 10 percent of herds were reported in some areas.

The drought also affected the dairy industry. Yearly milk production is about 90 million liters. About

half of Bolivia's milk consumption in recent years has been imported, mostly through donation programs. With the tightening of the world dairy supply situation, donations have been declining. This has further lowered milk consumption in Bolivia, which already has one of the lowest milk consumption rates in South America.

Food and farm policy

Bolivia has kept its inflation rate under control at 21 percent, a result of the continuation of the economic stability policies of the current Government. Four years ago, Bolivia was besieged by hyperinflation.

Agricultural credit in Bolivia continues to be a problem, but more international loans are being made available and private sources for credit are improving.

The Government has continued with its free market approach, exerting little control over marketing or prices. The main exceptions are wheat and sugar, both of which are tightly controlled. Prices for wheat and sugar are regulated by the Government at all levels of the marketing chain in consultation with producer and industry groups.

With the relatively poor performance of agriculture in recent years, some agricultural groups are pressing for fundamental changes in agricultural policy. Proposed changes include reduced taxes, more favorable credit, and better technical support, rather than price supports or marketing controls.

Imports and exports

The largest food imports are wheat and wheat flour, much of

which are provided under the United States' Food for Peace Program (Public Law 480). Food imports, which had risen steadily from 1985 to 1987, declined in 1988.

Due to higher prices for Bolivia's sugar and coffee, 1988 exports increased in value to \$111 million, despite a drop in volume. Significant increases in exports are expected for 1989, with expected larger shipments of soybeans and soybean products and sugar to the United States.

Bolivia exported 32,173 tons of sugar in 1988, down slightly from the 1987 total of 35,069 tons.

Soybean exports in 1988 totaled 65,671 tons, down from 84,314 tons in 1987.

With expected increases in Bolivian coffee production, Bolivian coffee exporters forecast a sharp rise in coffee export availabilities for 1989. Coffee exports totaled 8,711 tons in 1988, up from 5,894 tons in 1987.

Trade policy and prospects

The Government encourages exports through a tax refund of 10 percent of the export value for nontraditional goods, which includes agricultural products. These refunds consist of transferable tax certificates that can be used to pay debts and taxes to the Government.

Bolivia has an open market and has no significant import restrictions except the tight controls which exist on wheat and sugar. Imports, if any, require licenses. Given the sugar surplus, no licenses are granted for sugar. For wheat, all imports are carried out by the Government. ●

Brazil

Profile of agriculture

Brazil, the largest country in South America, is one of the largest suppliers of agricultural products to the United States and is also a major U.S. competitor in third-country markets.

Brazil is slightly smaller than the United States in total land area. It produces coffee, oranges and orange juice, rice, corn, sugarcane, cocoa, soybeans, and cotton. It is nearly self-sufficient in food production except for wheat imports.

Brazil is one of the world's largest net exporters of agricultural products. Primary agricultural production contributes about 13 percent to the gross national product and employs 25 percent of the population, but agricultural products

account for 40 percent of Brazil's export revenues.

Brazilian agriculture has a diverse structure. There are many subsistence farmers, as well as many extensive cattle operations.

In the southern part of the country, there is a blend of well-organized small farmer cooperatives and large capital-intensive corporate farms.

Brazil has one of the world's largest cattle herds and beef exports are an important component of Brazil's overall export picture.

Brazil is the world's largest sugarcane producer, with the majority of the cane used to produce ethanol. Some alcohol is mixed with gasoline, but most is used in cars designed to run on pure alcohol. Since almost all new cars in Brazil use only alcohol, sugarcane area has expanded rapidly in recent years.

Production highlights

Brazil's agricultural production in 1988 is estimated to have increased by less than 1 percent, contrasting with a record growth of 14 percent in 1987. Prolonged dry weather in major areas of central Brazil was responsible mainly for a drop in production of coffee and wheat. Producer dissatisfaction with Government programs also contributed to lower production of corn, pork, and rice.

The 1989 outlook for agricultural production is for moderate overall growth, with slight increases in tropical products and meat production. The soybean crop was a bright spot in 1988 and soybean production in 1989 is expected to increase to a record 22.3 million tons.

Brazilian grain production in 1988 declined 5 percent from the previous year to 43.6 million tons due to producer rejection of Government production programs for coarse grains and rice and weather problems for wheat.



Brazil at a Glance

Population (1988): 151 million

Urban population: 105 million

Population growth rate: 2.4%

Per capita income (1988): \$2,224

Arable land area: 592,000 square kilometers

Major crops: Coffee, oranges, rice, corn, sugarcane, cocoa, soybeans, cotton

Livestock sector: Beef and dairy cattle, poultry, pork

Leading agricultural exports: Coffee, orange juice, cocoa, sugar, cotton, bananas, meat

Leading agricultural imports: Wheat, livestock, poultry breeding stock, dairy products, fruits, vegetables, seeds, oilseeds

Agricultural imports as a share of total imports: 7.5%

U.S. share of total agricultural imports: 6.7%

Percent of population in agriculture: 35%

Beef production in 1988 increased to 2.4 million tons, boosted mainly by good producer prices and higher exports.

Brazil is the world's largest producer of cane sugar. About 40 percent of Brazil's annual sugarcane crop goes for sugar production, with the remaining 60 percent supplying Brazil's massive fuel alcohol system which powers the nation's automobiles.

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Bananas ¹	5,592	5,596
Cocoa beans ²	356	395
Coffee	2,280	1,500
Orange juice, concentrate	710	690
Oranges	10,895	10,486
Soybeans	17,300	17,800
Sugarcane ³	8,457	8,500

¹ 92 bunches per ton.

² Oct.-Sept. marketing year.

³ Based on production statistics and extraction rates.

	1987	1988
	<i>million metric tons</i>	
Animal products		
Beef and veal	2.2	2.5
Eggs ¹	15.4	15.9
Milk	11.0	11.5
Pork	1.2	1.0
Poultry	1.8	1.9

¹ Millions.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Cotton and linters	15	N/A
Dairy products	10	N/A
Fruits, vegetables, and seeds	14	N/A
Livestock products	24	N/A
Poultry breeding stock	9	N/A
Oilseeds	9	N/A
Total²	74	1,100

¹ Values are shown in U.S. dollars at \$US1=1.51 new cruzados. Includes commercial and concessional imports.

² Includes products not listed above.

Brazil ranks as the second largest cocoa producer after Cote d'Ivoire. The 1988/89 cocoa crop was forecast at 410,000 tons.

Brazil is the world's largest coffee-producing country. The country has over 4.2 billion trees planted on a total area exceeding 3.5 million hectares. Even though persistent drought in late 1988 significantly reduced the flowering potential for the 1989 crop, it is still estimated at about 26 million 60 kilogram bags—up slightly from 1988.

Farm and food policy

The main goal of Brazil's current economic policy is to continue to fight inflation, which has reached nearly 1,000 percent per year. One of the main features of the Government's plan for 1989 was to devalue the Brazilian currency, the cruzado, by 17 percent. However, the devalu-

ation of the cruzado still lags behind the inflation rate and is one of the main reasons for general protests from agricultural exporters, particularly the soybean sector.

During 1988, Brazilian farmers experienced relative stability in terms of agricultural policy, considering all the difficulties faced by the economy. The major agricultural policies, such as minimum support prices, were indexed to reflect monthly changes in inflation. This reduced the impact of the country's economic uncertainties and helped producers cope with high inflation rates.

Government programs to provide more credit to farmers are expected to face difficulties in 1989 due to the poor financial condition of the Government, and consequently could hurt 1989/90 production.

One of the most important agricultural issues for Brazil in 1989 is passage of new farm legislation mandated by the new Constitution approved in 1988.

There has been public debate on important agricultural issues such as agrarian reform, reduction of Government intervention in agriculture, and excessive taxation. Another important issue is achieving agricultural self-sufficiency, especially for wheat, corn, drybeans, manioc, meat, and milk.

Imports and exports

Agricultural imports in 1988 are estimated to have declined from 1987 levels, mainly due to lower wheat imports, restrictive food import policies, and the poor performance of the Brazilian economy.

The market for U.S. grain in Brazil was almost nonexistent in 1988 due to lower overall grain import demand and agreements Brazil has with Argentina and Canada, which more than covered import needs. The outlook for sales to Brazil in 1989 is brighter due to

reported reduced corn and wheat availabilities in Argentina and Canada.

Brazilian agricultural exports for 1988 were estimated to be above the 1984 record of \$13.2 billion. Export earnings from key agricultural products showed an increase of 19 percent above 1987. Soybean sales for 1988 were a record at \$3 billion, up 31 percent from 1987. Orange juice export earnings were also up 37 percent from 1987. Brazil exported 1.7 million tons of sugarcane in 1988, down nearly 30 percent from 1987 figures because of drought-induced short supplies.

Coffee continues to be among the leading foreign exchange earners, alternating the top position with soybean products. Coffee export earnings for Brazil were estimated at \$2.2 billion.

Although the volume of exports of soybeans and oil decreased in 1988, the total value of soybean and product exports increased to \$3.1 billion due to higher international prices. The rise in international prices also helped raise orange juice prices, even though exports dropped. Exports of orange juice in 1988 were estimated at 665,000 tons and valued at \$1.14 billion, up 38 percent from the 1987 value of \$830 million.

Beef exports set another record at over 500,000 tons. Poultry exports rebounded somewhat after 5 years of constant decline and reached 220,000 tons.

Trade policy and prospects

Brazil's ample resources have led the country to pursue protectionist policies which discourage imports of nonessential products while encouraging increased local production. The Government acknowledges the need for a more open economy but there has been little action to change the import substitution policy. ●

Canada

Profile of agriculture

Canada, one of the world's largest countries, has a climate that varies from temperate to arctic. Although Canada is a small agricultural producer relative to total world output, it is a major agricultural exporter and an importer of many agricultural products, especially high-value items.

Agriculture is a relatively small sector of the Canadian economy. However, it is important in western Canada, where most of the crop and much of livestock production occurs. Here, the dominant crop is wheat, followed by barley and rapeseed. Cattle production also is significant.

Dairy and hog production are the main farm activities in eastern Canada.

Agricultural Production

	1987/88	1988/89
	<i>thous. metric tons</i>	
Crop production ¹		
Barley	13,957	10,125
Corn	7,015	5,369
Flaxseed	729	414
Oats	2,995	2,993
Rapeseed	3,847	4,243
Rye	493	257
Soybean	1,270	1,153
Wheat	25,950	15,655

	1987	1988
	<i>millions</i>	
Livestock numbers ²		
Cattle		
Beef	10.80	10.86
Dairy	1.48	1.47
Hogs	14.86	15.40
Poultry		
Broiler chicks	.53	.55
Turkeys	.12	.12

¹ Crop years are Aug.-July.

² Estimates as of January 1 each year.

Forestry is a significant agricultural industry, covering 44 percent of Canada's total land area.

Commercial fisheries provide an annual catch of about 1.4 million tons, approximately 75 percent of which is exported.

Production highlights

The worst drought in the Prairie Provinces since 1961 caused 1988/89 wheat production to decline 40 percent from the 1987/88 level. This was the smallest volume of wheat produced in Canada since 1974. Wheat acreage is expected to increase at least 10 percent in the 1989/90 crop year.

Coarse grain production declined by 23 percent from 1987/88 levels due to drought.

Record rapeseed acreage of 3.7 million hectares was the major reason for a record harvest, 4.2 million tons, in 1988/89. While soybean acreage was also at an all-time high, dryness in Ontario, the major region of production, forced yields down 21 percent from the previous year's record, reducing production by 9 percent.

Rapeseed (canola) crush hit a record volume in 1987/88, fueled in part by demand for high-quality edible oil in the United States, as well as strong export demand in Asia and India. However, weak world demand for oil versus meal in 1988/89, combined with other factors, caused four crushers to close after November 1988. The record crush level will most likely not be reached again.

Milk production in 1988 increased by about 2 percent, even though the Canadian dairy herd has continued to decline gradually.

The year 1988 marked a downturn in Canada's hog industry as a cyclical upswing in production resulted in a sharp decline in production in the second half of



Canada at a Glance

Population (1988): 26.1 million
Urban population: 19 million
Population growth rate: 0.85%
Per capita income (1988): \$15,910
Arable land area: 498,807 square kilometers
Major crops: Grains (principally wheat), feed grains, oilseeds, tobacco, fruits, vegetables
Livestock sector: Livestock and meat, dairy products, fishing
Leading agricultural exports: Grains, oilseeds, pork, wood products
Leading agricultural imports: Fruits, vegetables
Agricultural imports as share of total imports: 6%
U.S. share of total agricultural imports: 57%
Percent of population in agriculture: 3.5%

1989 is expected to result in a return to profitability for hog producers.

Cattle slaughter in Canada in 1988 was about 3 percent smaller than in 1987, as producers held back more females for breeding. For 1989, the continued expansion of the beef herd and high feed prices are expected to result in slightly lower beef output.

Chicken output has increased steadily since 1984, reflecting increased demand from both the food service and home markets, although consumption remains well below U.S. levels. A modest production increase is expected in 1989.

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Animals, live	87.2	90.9
Dairy products	20.3	107.9
Feeds	90.6	104.5
Fruits, nuts	689.6	1,242.6
Fur skins, undressed	118.8	174.5
Grain products	102.9	157.9
Hides, skins, raw	50.0	53.4
Meats	160.0	367.8
Oilseeds	82.3	108.3
Oilseed products	216.7	263.7
Plantation crops	131.9	632.5
Sugar	46.6	176.2
Vegetables	492.6	618.2
Wool, raw	3.9	31.7
Total²	2,969.0	5,300.0

¹ Values are shown in U.S. dollars at US\$1=Canadian \$1.325. Includes commercial and concessional imports.

² Includes products not listed above, excluding forestry products.

Farm and food policy

Canadian agricultural policy goals include maintaining adequate food supplies for domestic needs and exports, supporting farm income, and preserving the family farm structure. Policy measures in the 1980's have aimed to address various problems in the farm sector: the poor financial condition of many farmers, excess production capacity, and increased export competition.

Policies for sectors that serve only the domestic market, notably dairy and poultry, are designed to limit foreign competition, primarily through import quotas. In addition, the Provinces have considerable

power in formulating agricultural policies.

Federal marketing boards regulate wheat, barley, and oats grown in the Prairie Provinces, and dairy products, chicken, turkey, and eggs on a national basis.

Imports and exports

Canada is both a major agricultural importer and exporter.

Canada depends entirely on imports for its raw cotton needs. The United States traditionally has been the major supplier, accounting for 81 percent of total Canadian raw cotton imports in 1987/88.

In 1987, Canada remained a net importer of seed, with total imports reaching \$104 million and exports totaling \$93 million. Imports of U.S. seed were \$86 million and exports going to the United States were \$77 million.

Canada relies on imports, primarily from the United States, for most of its horticultural needs.

Imports of horticultural and tropical products from the United States in 1988 totaled \$2.4 billion, accounting for about 55 percent of all horticultural imports.

Despite increased domestic output, Canada continues to be an important market for U.S. exports of chicken which are expected to increase by about 5,000 tons in 1989, bringing the total to 35,000-40,000 tons.

Agricultural exports account for about 8 percent of total exports and in recent years have contributed about half of Canada's trade surplus.

Although Canada is one of the world's largest grain exporters, drought in the summer of 1988 reduced the harvest, and consequently, wheat exports in 1988/89 are forecast to be nearly 50 percent less than the record 23.5 million tons of 1987/88.

The drought is also responsible for a forecast decline in barley exports. Exports are lagging behind

last year's figures and are expected to fall more than 40 percent to 2.5 million tons this year.

Forecast corn exports are drastically reduced, due to the reduced production in Ontario.

The bright spot for Canadian feed grain exports is oats, where export volume is forecast to be the highest in 20 years.

In 1988, the value of Canadian pork exports, estimated at \$808 million on a preliminary basis, was second only to wheat as Canada's most valuable agricultural export item.

In 1988, live hog exports to the United States were estimated to have increased to about 650,000 head from 410,000 in 1987.

Canada was a net exporter of cattle and beef in 1988 to the United States.

The United States is Canada's No. 1 market for tobacco. In 1987, Canada exported \$54 million worth of tobacco to the United States.

Canadian horticultural exports reached \$994 million in 1987. Of this, an estimated 56 percent went to the United States.

Forest product exports contribute significantly to Canada's trade balance. In 1988, wood industries alone registered a positive trade balance of nearly \$7.2 billion.

Trade policy and prospects

Canada is highly dependent on trade and is a supporter of the General Agreement on Tariffs and Trade and its goals of a more open world trading environment. It is a member of the Cairns group, a coalition of agricultural trading countries working together to present a common position in the Uruguay Round of the Multilateral Trade Negotiations.

On January 1, 1989, Canada and the United States implemented a free trade agreement designed to reduce trade barriers between the two countries. ●

Chile

Profile of agriculture

Chile has a market-oriented, export-led economy—and its agriculture follows this pattern as well. The population of 13 million is not large enough to reward farmers consistently for selling commodities on the domestic market. Consequently, for most commodities, supplying the domestic economy takes a back seat to the higher returns received for producing top-quality products for foreign markets.

The main Chilean crops are sugar beets, wheat, potatoes, corn, apples, and table grapes. Forestry

production is one of the fastest growing sectors of the agricultural economy—and the emerging giant of the country's export sector.

Livestock production is dominated by beef production. Combined chicken and pork production barely surpasses beef production. Sheep are raised for wool rather than meat—and when animals are slaughtered, they are generally consumed by the people in the countryside.

Production highlights

The outlook for Chile's agricultural sector (including forestry) is generally positive. Crop production has nearly doubled since 1980 even as actual planted area has declined.

Farmers have learned to produce products to meet the demands of foreign markets. The fresh fruit sector has led the way in demonstrating how farmers and investors can reap large returns rapidly from a free-market economy. Now other agricultural sectors are attempting to follow the example of the fruit sector—and some sectors are expected to surpass it. The fresh water fish (salmon and trout), forestry, and fresh vegetable sectors are all expected to grow at a rapid rate over the short-term.

The country is approaching self-sufficiency in wheat and rice production, although shortfalls still exist for durum wheat and Chilean rice producers continue to produce short-grain rice despite the fact that the demand for imported long-grain rice has risen dramatically. The reluctance to shift apparently stems from the fact that growing short-grain rice requires less technical expertise and investment than long-grain production.

The forestry sector is one of the most rapidly growing segments of Chilean agriculture. In the past 20 years, actual forest plantings have increased nearly tenfold. Over this same time, exports climbed nearly 20 times in both value and volume.



Chile at a Glance

Population (1989 projected): 12.9 million

Urban population: 10.1 million

Population growth rate: 1.6%

Per capita gross domestic product (1989 projected): \$1,600

Arable land area: 2.1 million hectares

Major crops: Sugar beets, wheat, potatoes, corn, apples, table grapes, forest products

Livestock sector: Beef production dominates sector

Leading agricultural exports: Table grapes, apples, peaches, nectarines, pears, dry beans, sheep wool, plums, apple juice, malted barley, canned peaches, rabbit hair, raisins, rosehips

Leading agricultural imports: Cotton, corn, dry milk, soybean meal, coffee, bananas, wheat, sugar, tea, hides and skins, mate, rice

Agricultural imports as share of total imports: 5.5%

U.S. share of total agricultural imports: 16%

Percent of population in agriculture: 19%

Chile has a climatic advantage in tree production. Tree growth is three to four times more rapid in Chile, depending on the variety, than in the United States or Europe. Export

Agricultural Production

	1987	1988 ¹
	<i>thous. metric tons</i>	
Crop production		
Fruits, total	1,423	1,670
Apples	580	630
Table grapes	370	440
Other fruits	473	600
Grains, total	2,756	2,804
Corn	610	661
Rice	95	162
Wheat	1,870	1,734
Other grains	181	217
Oils, total	135	172
Rapeseed	95	123
Sunflower	40	49
Beans	81	100
Garbanzos	15	8
Lentils	25	20
Potatoes	730	928
Sugar beets	2,650	2,487
Tobacco	9	10

	1987	1988 ¹
	<i>thous. metric tons²</i>	
Livestock production		
Beef	182.4	196.0
Pork	86.8	100.0
Chicken	90.4	106.0

¹ Calendar years.

² Carcass weight.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$millions¹</i>	
Selected products		
Cotton	1.1	4.7
Fruits and vegetables ¹	—	13.9
Grains and products	32.0	55.6
Wheat	4.2	13.8
Corn	27.4	27.5
Rice	8.6	0.1
Barley	—	1.4
Other grains	4.3	0.3
Livestock and products	5.7	51.3
Oilseeds and products	0.3	35.3
Seeds	1.5	3.9
Sugar and tropical products	—	12.8
Tobacco	—	2.4
Total farm product imports²	48.2	291.6

¹ Values are shown in U.S. dollars at US\$1=245 pesos exchange rates. Includes commercial and concessional imports.

² Includes products not listed.

success in New Zealand, Asia, Europe, and the United States continue to encourage further development in this sector.

Farm and food policy

Chile's agricultural policy is built around the principle, "let the market function." Agricultural policy can be summarized as: price bands for wheat, sugar, and vegetable oils which encourage production and discourage imports; a value-added tax of 16 percent for all commodi-

ties, both imported and domestically produced; established floor prices for dairy products, cotton, and beef; and a direct subsidy to the forestry sector to stimulate production and exports.

The level of food consumption in Chile is heavily dependent on domestic production and the level of exports. When domestic production is large, per capita consumption is large; when production shrinks, food consumption shrinks.

Likewise, the growth in exports has also spurred a growth in domestic consumption of certain foods. A case in point is fruit consumption, which is nearly twice the 1970 level. All the fruit that does not meet the quality levels of foreign markets is sold in the Chilean market. However, while foreign markets are enjoying large silver dollar-sized grapes, Chilean consumers are left with small, discolored fruit.

Chile has the largest per capita consumption of wheat of any country in Latin America. Bread and pasta make up the single largest item in the Chilean diet. Wheat consumption is over four times larger than beef, pork, and poultry meat consumption combined.

Per capita consumption of pork and poultry has been increasing over the past several years as consumers are looking for substitutes to their major source of animal protein—beef and eggs. However, beef consumption is also on the rise—a sign that the economy is in relatively good condition. One of the first food items cut back in a time of pocket-book stress in Chile is beef.

Imports and exports

The agricultural trade balance is heavily in favor of Chilean exports. Exports are over three times larger than imports. The agricultural trade balance with the United States is even more pronounced—exports are over eight times larger than imports.

Bulk commodities and farm inputs comprise most of Chile's

agricultural imports. The country's biggest import items in 1988 were cotton, corn, dry milk, soybean meal, coffee, bananas, wheat, sugar, tea, hides and skins, mate, and rice.

Wheat has traditionally been the most important U.S. farm export to Chile, but corn sales are becoming more significant. In addition to bulk commodities, other major imports include inedible tallow, dairy and beef semen, and soybean isolates. Other needs that are not readily met by domestic production include cotton, seeds, nursery plants, packaged foods, spices, and vegetable oils.

On the export side, fruits are far and away the most important export items—with table grapes and apples dominating.

The United States is the largest market for Chilean agricultural exports, taking roughly 40 percent of the total. The withdrawal of Chilean fruit from the U.S. market for a short while in 1989 after two grapes were found to have been poisoned dealt a temporary setback to sales of one of Chile's biggest export commodities. However, a market promotion campaign in the United States should enable the fruit industry to recover fully in the 1989-90 shipping season.

Trade policy and prospects

Chile's trade policy emphasizes exports and imposes some restrictions on imports. Those restrictions include:

- a 15-percent ad valorem tariff on the value (c.i.f. basis) of all imports;
- a variable import surtax that effectively allows only residual imports of wheat and oilseed commodities;
- a licensing policy for corn and wheat imports in order to protect domestic producers; and
- favorable tariff treatment for other Latin American countries in the region on such agricultural commodities as cotton, tobacco, vegetable oil, and soybean meal. ●

Colombia

Profile of agriculture

Located in the northwest corner of South America, Colombia is bordered by Venezuela, Brazil, Peru, Ecuador, and Panama. It is the continent's fourth largest country and is soon expected to surpass Argentina to become the third most populous nation in Latin America, after Brazil and Mexico.

Agriculture accounts for more than 20 percent of Colombia's gross domestic product and usually accounts for over 50 percent of its export earnings.

Because of Colombia's diverse climate and topography, various crops can be grown. Cocoa, sugarcane, coconuts, bananas, plantains, rice, cotton, tobacco, cassava, and most of the nation's cattle are produced in the hot regions—from sea level to 3,300 feet. The temperate regions—3,300 to 6,600 feet—are better suited for coffee, flowers, corn

and other vegetables, and fruits such as citrus, pears, pineapples, and tomatoes. The cold regions—6,600 to 9,900 feet—produce wheat, barley, potatoes, cold-climate vegetables, dairy cattle, and poultry.

All of these regions yield forest products, ranging from tropical hardwoods in the hot country to pine and eucalyptus in the colder areas.

Production highlights

The agricultural sector's growth rate in 1988 was 3 percent as opposed to 4 percent in 1987. The lower growth rate was due to bad weather, social instability in the countryside, and the high cost of agricultural production.

Production of beans, corn, and sorghum was up. Beans are a basic staple in Colombia and 1988 production was 96,000 tons, 6 percent above 1987. The 1989 bean crop is expected to be smaller than normal due to heavy rains in late 1988. Corn production was 908,000 tons, nearly 6 percent above 1987. Sorghum production in 1988 totaled 707,000 tons, 3 percent higher than in 1987.

Rice production declined in 1988 due to erratic weather, unattractive profit potential, and insect infestations. Milled rice production in 1988 was 1.1 million tons, 5 percent below 1987. Production in 1989 is expected to increase due to favorable producer support prices.

Output of oilseeds and products rose in 1988, due mostly to significant increases in the production of African palm oil. Palm oil output grew by 15 percent from 147,000 tons in 1987 to 169,000 tons.

Cotton production increased by 17 percent in 1988, but is expected to decline in 1989 due to bad weather in late 1988 and marketing problems. Production of soybeans in 1988 fell by 10 percent. As a result of increases in soybean support prices, 1989 production is forecast at 200,000 tons as compared with



Colombia at a Glance

Population (1989): 31.3 million

Urban population (1989): 21.9 million

Population growth rate (1989): 1.5%

Per capita income (1989): \$1,500

Arable land area: 500,000 square kilometers

Major crops: Coffee, bananas, cotton, cut flowers, sugarcane, rice, corn, potatoes, tobacco, soybeans, sorghum, yucca, yams, plantains

Livestock sector: Beef cattle ranches, dairy, poultry, swine

Leading agricultural exports: Coffee, bananas, cut flowers, cotton, sugar

Leading agricultural imports: Wheat, oilseeds and products, barley, sorghum, lentils, dried beans, dried peas, tallow

Agricultural imports as share of total imports (1988): 8.0%

U.S. share of total agricultural imports (1988 estimate): 63.5%

Percent of population in agriculture: 30%

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Bananas	1,225	1,196
Coffee	706	780
Corn	830	908
Cotton	102	134
Dry beans	106	96
Plantains	2,183	2,611
Rice, milled	1,220	1,154
Sorghum	570	707

Livestock numbers

	1988
	<i>millions</i>
Livestock numbers	
Beef cattle	17.9
Dairy cows	1.9
Hogs	2.4
Laying hens	21.0
Broilers ¹	188.0

¹ Number slaughtered in 1988.

169,000 in 1988 and 147,000 tons in 1987.

The livestock sector shrank during 1988. Ranchers were particularly hard hit by guerrilla groups, who require many ranch owners to pay them large amounts of money monthly or face reprisals.

Value of Agricultural Imports 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Dry peas	4	11
Soybeans	39	45
Sorghum	3	3
Wheat	45	87
Total²	257	405

¹ Values are shown in U.S. dollars at US\$1 = Colombian \$300. Includes commercial and concessional imports.

² Includes products not listed above.

Dairy production grew by 2 percent in 1988 to 3.6 million tons, due to an increase in the retail price of milk and favorable weather.

Farm and food policy

The Government establishes support prices twice a year (there are two crops) for wheat, corn, rice, malt barley, grain sorghum, soybeans, dry beans, and sunflowers. In an effort to encourage production, support prices were increased in late 1988 for wheat, white and yellow corn, rice, malt barley, grain sorghum, soybeans, dry beans, cotton, sesame seed, and yucca.

In late 1988 the Government announced a plan to encourage greater production of eight basic commodities in order to increase self-sufficiency, reduce imports, stem inflation, and increase employment. The commodities were rice, corn, soybeans, beans, cassava, meat, dairy products, and vegetables.

The plan includes high official support prices for the eight commodities and policies to reduce agricultural production costs. These policies have already begun to reap benefits. Production of rice, soybeans, and corn is expected to rise

substantially in 1989, mostly in response to favorable producer support prices.

Imports and exports

Colombia is an importer of wheat, oilseeds and products, tallow, barley, sorghum, lentils, dried beans, and dried peas. U.S. agricultural exports to Colombia in 1988 totaled \$257 million. The principal products were soybeans, \$39 million; wheat, \$45 million; tallow, \$23 million; peas, \$4 million; apples, \$3 million; and sorghum, \$3 million. The European Community and Canada also export wheat and grains to Colombia.

Competitors for Colombia's agricultural markets are other Latin American countries such as Argentina (wheat), Brazil (soybean oil), and Chile (wine, apples and pulses.)

Rice was imported in 1988 from Thailand, Egypt, China, and Ecuador. However, greater rice production is being encouraged for 1989 and no rice imports are predicted. Corn was imported from the United States during a shortfall between crops. No corn imports are expected in 1989.

Bean imports in 1988 were 7,000 tons, of which 3,135 tons came from the United States. Imports for 1989 are projected at the same level.

Colombia is an important market for U.S. pulses. Import licenses for lentils and peas are easy to obtain. Pea imports in 1988 totaled 30,000 tons, of which 13,200 were bought from the United States, with the rest coming from Canada.

Lentil imports for 1988 totaled 15,000 tons, twice the amount imported in 1987. Lentil imports came from the United States, Canada, and Chile.

Colombia also imports chickpeas or garbanzo beans. Chickpea imports in 1988 totaled 1,500 tons and for 1989 estimates are 2,000 tons.

Colombia imported 217,808 tons of soybeans in 1988, all from the

United States except for a 22,000-ton shipment from Argentina.

In 1988, Colombia imported 748,000 day-old chicks for a total of \$2 million. About 90 percent of these imports came from the United States.

Colombia's agricultural exports in 1988 were estimated at over \$3.1 billion and accounted for 64 percent of total exports. Colombia exports large amounts of coffee, bananas, and cut flowers to the United States. Agricultural exports to the United States totaled an estimated \$740 million in 1988.

The world's second largest coffee producer, Colombia produces 12 to 15 percent of the world's coffee. West Germany buys 29 percent of Colombia's coffee exports; the United States, 23 percent. In 1988, Colombia exported an estimated \$186 million of flowers to the United States, Europe, and Japan. About 80 percent went to the United States, primarily carnations, pompoms, and mums.

Trade policy and prospects

Imports of all products are tightly controlled by import licensing, both to conserve foreign exchange and to protect domestic production. First priority for import licenses is given to the Government's agricultural marketing agency, which imports on its own account to assure essential stock levels and has the authority to approve imports by private businesses.

Export assistance is provided by the Government to a number of products through a rebate on commercial income taxes.

Opportunities exist for exporting a wide variety of agricultural products to Colombia, including wheat, soybeans, soybean oil and meal, feed grains, sunflowers and products, semen and embryo transplants, dairy and beef cattle, pigs and day-old chicks for breeding, seeds, and wine. Colombia also has the potential to be a market for products such as prunes and raisins for further processing and packaging in Colombia. ●

Costa Rica

Profile of agriculture

Agriculture constitutes Costa Rica's most important economic sector and employs 27 percent of its labor force.

An economically and politically stable Central American country of about 2.9 million people, Costa Rica has a terrain of coastal plains separated by mountains. Occasional earthquakes occur, and lowlands typically flood at the onset of the rainy season. The tropical climate, however, is well suited for the country's main agricultural products of coffee, bananas, cocoa, corn, livestock, rice, beans, sugarcane, ornamental plants, and pineapples.

Costa Rica's gross domestic product grew 3.4 percent in 1988. Agriculture, with a 3.9-percent growth rate, was the second most productive sector of the economy, after construction.

Production highlights

Coffee is Costa Rica's largest agricultural commodity, and coffee producers harvested a record crop of

2.7 million 60-kilogram bags in 1988/89.

Banana production is concentrated in the Atlantic zone of the country and production increased significantly in 1988/89 as a result of new plantings and better farm management.

Cane sugar production dropped 11,000 tons below the 1986/87 levels. From its sugarcane crop, Costa Rica produces alcohol, raw sugar, white plantation sugar, and the domestic requirements of refined sugar. Much of the white sugar is used to produce candy and beverages.

Nontraditional crops, such as ornamental plants and citrus, are a growing substitute for sugarcane in the region of San Carlos. In the highlands, even though coffee and sugarcane producers enjoy complementary harvest seasons, area planted to the cane crop is decreasing because of low profitability.

Production of dairy and beef cattle has fluctuated in the past several years. Although plenty of rain during 1988 provided for good pasture and prices were attractive for beef cattle raisers, domestic beef consumption steadily declined between 1986 and 1988. Consumers are shifting to poultry and pork.

Cocoa production is improving. Production jumped from 3,900 tons in 1988 to an estimated 4,100 tons in 1989. The citrus processing industry is growing rapidly. Because Costa Rican citrus is not well suited for fresh consumption, most market development possibilities exist for processed fruit. Investment in citrus is increasing after the construction of a new processing plant which takes advantage of the country's freeze-free environment and its proximity to the United States.

The 1988/89 crop year was poor for all major food and feed grains. Bad weather, combined with a lack of well-designed production and price policies, a shortage of agricultural credit, and inefficiencies in pro-



Costa Rica at a Glance

Population (1988): 2.9 million

Urban population: 881,000

Population growth rate: 2.6%

Per capita income (1988): \$1,530

Arable land area: 3,054 square kilometers

Major crops: Bananas, cocoa, coffee, rice, sugarcane, white corn, beans, pineapple

Livestock sector: Beef is a major export; dairy and poultry production for domestic consumption

Leading agricultural exports: Coffee, bananas, beef, ornamental plants, pineapples

Leading agricultural imports: Wheat, yellow corn, cotton, soybeans, soybean meal

Agricultural imports as share of total imports: 11%

U.S. share of total agricultural imports: 52%

Percent of population in agriculture: 27%

duction, created production shortfalls. Consequently, beans, corn, and rice were imported.

Cotton production suffered in 1988/89 as a result of heavy rains and overall bad weather. Continued expansion of the textile industry points to increasing domestic demand for cotton, while production continues to decline. Cotton imports from the United States rose from \$40,000 in 1986 to \$2 million in 1987 and to \$3 million in 1988. Costa Rica is self-sufficient in tobacco production.

Agricultural Production		
	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Beef	99	89
Cocoa	4	4
Coffee	148,000	147,000
Corn	110	7
Rice	119	90
Sugar	230	218
	<i>1988</i>	
	<i>millions</i>	
Livestock numbers		
Beef cattle	1.34	
Dairy cattle ¹	0.33	
¹ Includes double-purpose cattle.		

¹ Includes double-purpose cattle.

Value of Agricultural Imports, 1988

Selected products	Imports from	
	United States	All suppliers
	\$ millions ¹	
Corn	17.3	N/A
Cotton	3.2	N/A
Fruits, vegetables	5.1	N/A
Rice	3.7	N/A
Soybeans	10.8	N/A
Soybean meal	4.6	N/A
Wheat	19.9	N/A
Total ²	78.84	151.89

¹ Values are shown in U.S. dollars at US\$1=79 colones. Includes commercial and concessional imports.

² Includes products not listed above.

Farm and food policy

In the agricultural sector, the goal of the Government is to stimulate productivity in order to achieve self-sufficiency for basic food products. The Government is targeting assistance—in the form of subsidized credit for small farmers, a restructuring of farmer debt, improvement of extension services, and credit consulting services—to 19 priority crops and seven regions of the country. The priority products include bananas, cocoa, coffee, beef cattle, pineapples, ornamental plants, and rice.

The Government intervenes in the domestic marketplace by setting prices for producers and consumers for a number of basic agricultural commodities.

The Government would like to cut the inflation rate in half and, at the same time, to stimulate increased productivity in basic food items. Putting domestic prices in line with world market prices is viewed as a

means to motivate farmers to either produce more efficiently or switch to more profitable crops.

However, the average farm size is small and the Government has for many years been overprotective of small farmers. Therefore, their ability to adjust and survive is uncertain. Moreover, a good deal of confusion remains about the Government's role in support of efficient production, in support of private enterprise, and in defining pricing mechanisms.

Imports and exports

In 1988, Costa Rica imported beans, rice, soybeans, wheat, and yellow corn. Rice imports arrive from Thailand and the United States; bean imports, from Nicaragua, Argentina, and Mexico; and all wheat imports, from the United States. Costa Rica exported \$346 million worth of agricultural products, mostly coffee and bananas to the United States in 1988. Coffee remains Costa Rica's most important export crop, with exports in 1988/89 amounting to \$324 million to all sources.

Bananas are the second major agricultural export commodity. Costa Rica exported approximately \$246 million worth of bananas in 1988, up \$8 million from the year before. Total fresh banana exports to the United States alone climbed \$21.7 million between 1987 and 1988.

Raw sugar exports rose significantly in 1988 to a value of \$16.4 million, 30 percent of which was shipped to the United States and 70 percent to the Soviet Union. The volume and value of beef exports declined because of smaller domestic cattle production. Nearly all beef exports in 1988 were destined for the United States.

Pineapple is steadily gaining importance as an export crop. Pineapple grows faster in Costa Rica than in any other location of the world because of consistently

favorable temperatures year round. In 1988, fresh pineapple exports jumped to \$31 million.

Trade policy and prospects

One of the Government's agricultural policy goals is to sustain and fortify exports of nontraditional products, such as black pepper, cut flowers, macadamia nuts, oilseeds, and ornamental plants.

As for imports, the Government continues to protect domestic producers and industries through high tariffs, taxes, and import licensing. These barriers also have been erected to provide revenue to the Government and to conserve foreign exchange. However, under the terms of an international loan package, the Government is considering some tariff reductions, import liberalization, and reshaping its domestic pricing policies according to the world market.

Although the Government eliminated surcharges on most products and reduced the fixed tax on imports from 3 percent to 1 percent early in 1988, the Central Bank subsequently levied an additional 2 percent charge on imports, which effectively reinstated the fixed tax to 3 percent.

Costa Rica is interested in becoming a signatory to the General Agreement on Tariffs and Trade (GATT) and, as part of that effort, is undertaking bilateral consultations with major trading partners, including the United States. In consultations between the United States and Costa Rica, both liberalization of general trade policies and reduction of specific tariff levels are being discussed.

Concurrently with GATT negotiations, Costa Rica and other Central American Common Market countries, which include El Salvador, Guatemala, and Nicaragua, are reviewing their combined trade regime with a view toward liberalization. ●

Cote d'Ivoire

Profile of agriculture

Agriculture, including forestry and fisheries, is a major priority in Cote d'Ivoire, receiving nearly 40 percent of the Government's budget allocation. The agricultural sector provides employment and income for about 60 percent of the population, contributes a third of the gross domestic product, and forms the basis of the country's principal industries.

Primary crops are cocoa, coffee, cotton, and bananas. Main food crops are yams, cassava, plantains, rice, and corn. Grains, including imported wheat and rice, supply about 40 percent of the calories in the diet, while roots and plantains contribute 35 percent.

Cote d'Ivoire is the world's largest producer and exporter of cocoa and the third largest exporter of coffee. The country's economy is heavily dependent on export earnings from these two crops. However, in recent years, low international

prices for cocoa and coffee have decreased foreign exchange returns.

Even so, investment in agriculture is rising, and agricultural industries are expected to maintain a growth rate of 1.3 percent in 1989, even if exports remain mediocre.

Production highlights

Food crop production for domestic use increased by 3.2 percent in 1988; a 5-percent increase is expected in 1989. Tuber production has been at a high level, which satisfies the domestic market.

Grain production, especially corn and rice, increased due to favorable rainfall, larger plantings, and improved seeds. Further gains are expected in 1989.

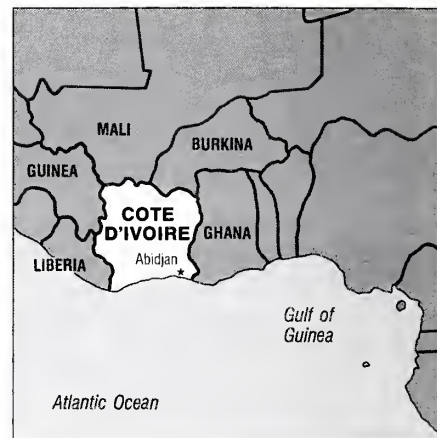
Livestock production declined in 1988 because local products were not price-competitive with imports. Half of the poultry farms shut down because of sales losses. Only pork production rose. About 36 percent of livestock and dairy demand is met by domestic production.

Vegetable production increased in 1988 and is expected to rise again in 1989 due to improved technical assistance to farmers, favorable rainfall, and high market prices. Major products are eggplant, tomatoes, okra, pimentos, and gourds.

Overall production of export crops in 1988 increased by 5 percent. Cocoa, cotton, and rubber production increased sharply, but coffee production fell. Output of export crops in 1989 is forecast to increase 2 percent.

Cotton production is on an upward trend, due to continued gains in planted area, efficient technical supervision, good producer prices, increasing mechanization, and favorable weather.

Rubber production has increased due to increased planted areas coming into maturity, efficient technical assistance, adequate credit for farmers, attractive producer prices, and favorable export prices.



Cote d'Ivoire at a Glance

Population (1988): 11.2 million
Urban population: 4.9 million
Population growth rate: 3.8%
Per capita income (1988): \$920
Arable land area: 28,620 square kilometers
Major crops: Cocoa, coffee, cotton, bananas
Livestock sector: Cattle, hogs, poultry, sheep
Leading agricultural exports: Cocoa, coffee, cotton, bananas
Leading agricultural imports: Rice, corn, vegetables, meat
Agricultural imports as share of total imports: 53%
U.S. share of total agricultural imports: 3%
Percent of population in agriculture: 85%

Agricultural Production

	1987/88	1988/89
	<i>mil. metric tons</i>	
Crop production ¹		
Bananas	0.13	—
Corn	0.54	0.57
Molasses	0.06	0.07
Rice	0.62	0.65
Sugar	0.14	0.15
Vegetables	0.12	0.14

	1988	1989
	<i>thous. metric tons</i>	
Livestock production		
Beef	14.1	13.8
Pork	7.1	7.2
Poultry	16.9	16.7
Sheep	4.9	4.8

¹ Crop years are July-June.

Banana production in 1988 was down from 1987 and is expected to fall again in 1989. The principal reasons are the absence of credit and technical assistance to farmers.

Sugarcane production fell in 1987/88 due to light rainfall and a delay in installing irrigation equipment. Production is expected to resume its upward trend in 1988/89. Expected increases in 1987/88 molasses production did not occur due to the fall in sugarcane production.

Commercial production of tobacco increased in 1987/88 and is

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Animal products	.893	32
Beef	.054	21
Dairy products	.016	73
Grains	7	111
Corn	3	3
Barley	0	4
Grits	0	2
Rice	4	57
Wheat	0	37
Horticultural products	.014	38
Live animals	0	72
Oilseed products	0	4
Soybean meal	0	2
Vegetable oil	0	2
Tobacco	5	27
Total²	13.6	413

¹ Values are shown in U.S. dollars at US\$1=285 francs. Includes commercial and concessional imports.

² Includes products not listed above.

expected to increase again in 1988/89.

Farm and food policy

Government policy is designed to encourage self-sufficiency in food production and the protection of natural resources and forests.

Specific goals are to increase food crop output, develop rural areas, modernize agriculture, diversify agricultural activities, guarantee remunerative producer prices, and promote private Ivoirian/foreign investment in agriculture.

These efforts are expected to increase productive capacity, generate foreign exchange, regenerate coffee plantations, improve the quality of cocoa, and gradually eliminate food imports.

The Government has restructured State corporations to promote private enterprise and recently privatized all State-owned rice mills.

The Government also is working to encourage young people to modernize farming and to stay on farms to replace the aging farm population.

Farmer cooperatives also are promoted in order to pool farmer resources in production, marketing, and procurement and to enhance creditworthiness.

The Government has guaranteed relatively high prices to growers and restricted exports of cocoa and coffee.

Imports and exports

Overall agricultural imports were estimated to be \$462 million in 1988 compared to \$481 million in 1987. The principal items imported were rice, wheat, live animals, dairy products, animal products, beverages, tobacco, and horticultural products.

Despite increases in grain production in 1988, rice and corn imports are expected to increase in 1989.

Vegetable imports increased somewhat from the 1987 level and included leeks, onions, carrots, and spinach.

Before 1988, frozen meat imports were limited by consumers' preference for fresh meat. However, recent economic difficulties have made people more sensitive to price. Hence, low-priced imported European products are being substituted for fresh meat.

Imports of chilled and frozen beef were up in 1988; pork imports

increased sharply; imports of mutton and poultry were down. Imports of poultry meat are mostly turkey parts; broiler imports are banned.

Overall agricultural exports in 1988 amounted to \$1.5 billion compared to \$2.1 billion in 1987.

Cocoa and coffee's shares of total exports are about 40 and 20 percent, respectively. Other agricultural exports include cotton, pineapples, and bananas.

Corn and vegetable exports increased and included onions, cabbages, carrots, gourds, asparagus, green beans, and peas.

Raw sugar exports declined due to increased domestic consumption and the Government's reduction of the export quota. Molasses exports declined also.

Trade policy and prospects

The Government has undertaken a policy to liberalize trade. It recently pledged to reduce tariffs under an agreement with The World Bank. However, the country is having difficulty meeting the agreement's timetable.

Falling income and rising taxes are restricting the Cote d'Ivoire's ability to import. Cocoa receipts, which normally account for 40 percent of foreign exchange earnings, have slumped for the second consecutive year due to the decline in world cocoa prices. The Government rescheduled its debt in February 1988 because of declining world cocoa and coffee prices.

Rice imports are controlled by the Government, which issues licenses to private individuals for imports of high-quality consumer-packaged rice. The Government contracts directly for imports of bulk rice. Rice is also subject to a tariff.

Cote d'Ivoire is a member of the General Agreement on Tariffs and Trade. ●

Denmark

Profile of agriculture

Agriculture is an important component of Denmark's overall economic picture, although its contribution to the overall gross domestic product (GDP) has declined considerably since World War II. Today it accounts for about 9 percent of the GDP.

Denmark's flat and rolling terrain, mild winters, cool summers, and strong prevailing westerly winds have rendered almost the entire area productive. Unlike other Nordic countries, a large portion—some 62 percent—of Denmark's land is arable. The country produces its own feed grains and has an abun-

dance of grazing land. This accounts for Denmark's large production of animal products, dairy products, pork, and beef. The country also produces root crops.

Production highlights

Agricultural production increased 2.5 percent, on a volume basis, in 1988. Crop production increased 12 percent, while livestock production was down 1 percent.

Grain production was 8.1 million tons, a 12-percent increase over the 1987 level, the second highest level in history.

Milk production declined nearly 3 percent, since as a member of the European Community, Denmark was required to comply with the EC's 2.5-percent quota reduction. Since 1983, Denmark's milk production has decreased about 14 percent, from 5.2 million tons to 4.5 million tons.

The milk quota has reduced the supply of beef and veal markedly. Since 1983, the dairy herd has gone from 1,003,000 head to 774,000 head. In 1988, beef production declined by approximately 6 percent. Production of pork increased in 1988 by 1 percent while production of eggs and poultry decreased by 4 percent.

In 1989, gross income in agriculture is expected to increase by \$149 million to \$3.6 billion. Because of increasing production, cash receipts from sale of farm products are predicted to increase by \$327 million to \$7.1 billion. Costs of raw materials are expected to fall by about \$75 million due to reductions in quantities and prices.

Livestock sales are expected to rise by about \$75 million to \$5.2 billion, as a result of higher production and slightly increased prices. Despite lower milk production, milk sales are expected to increase by \$45 million, and a similar increase is foreseen for the sale of beef and veal. Production of milk and beef



Denmark at a Glance

Population (1988): 5,125,676
Urban population: 4.3 million
Population growth rate: 0.08%
Per capita income (1988): \$15,370
Arable land area: 26,273 square kilometers
Major crops: Cereal, root crops
Livestock sector: Dairying, animal husbandry
Leading agricultural exports: Meat, dairy products, fish and furs
Leading agricultural imports: Oilseeds, grain, animal feedstuffs, wood and paper
Agricultural imports as share of total imports: 8.5%
U.S. share of total agricultural imports: 10%
Percent of population in agriculture: 6.1%

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Barley	4,355	5,419
Industrial seed	592	504
Oats and mixed grains	93	202
Pasture and grass		
for feed	17,195	20,797
Potatoes	942	1,246
Pulses	528	508
Root crops		
for feed	5,470	7,012
Rye	512	366
Sugar beets	2,681	3,379
Wheat	2,311	2,080
	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Cattle	2.40	2.32
Beef	0.06	0.96
Dairy	0.98	0.92
Hogs	9.42	4.05
Poultry (layers)	4.00	4.00
Sheep	0.01	0.01

¹ Estimates as of January 1 each year.

¹ Estimates as of January 1 each year.

should decline by 2 percent, while veal production should decline by 1 percent.

Pork production is expected to increase slightly with prices increasing up to 8 percent. Some change in cash receipts is foreseen for other animal products, including furs. Overall, livestock production is forecast to increase by about 2 percent.

The sale of cash crops in 1989 is expected to fall by about \$267 million due to a fall in both quantities and prices of 7 to 8 percent. Sales are expected to decrease for all cash crops except grass seeds and potatoes. Sales of cereals are ex-

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Grains and products	5	185
Feedstuffs		
(mainly oilmeals)	27	594
Fruits and vegetables	25	203
Oilseeds	17	26
Tobacco and products	34	82
Total²	149	2,400

¹ Values are shown in U.S. dollars at US\$1=6.73 kroner. Includes commercial and concessional imports.

² Includes products not listed above.

pected to decline the most with a fall of \$149 million, with the greatest decline in rapeseed.

Farm and food policy

Denmark is the only Nordic country that is a member of the EC. As a member, Denmark's agriculture obtains considerable financial support from the EC—\$1.43 billion in 1988. The EC's Common Agricultural Policy (CAP) determines Denmark's agricultural production policies.

The CAP relies largely on a price support policy to maintain farmers' incomes. Although the method of price support varies somewhat from product to product, certain basic concepts are nearly universal.

Internal prices are maintained in two ways. First, levies and duties facing imported commodities which compete directly with Community production are set at such a level so as to ensure that those commodities cannot be sold at a price less than

the EC support level. Second, intervention buying is used to withdraw excess supplies from the market and strengthen prices. Finally, export subsidies are granted by the EC to allow surpluses to be sold on the world market.

Denmark was a net recipient of financial benefits under the CAP during 1988. Its most significant support was received for intervention purchases and rapeseed processing subsidies.

Last year, the Danish government reached an agreement to assist farmers with their debt burdens. The agreement called for immediate financial relief for farmers and new farm legislation.

Imports and exports

Danish imports were up in value in 1988, although the U.S. share declined from 11 percent to 8 percent. Denmark's principal imports were grains, fruits and vegetables, oilseeds, feedstuffs, and tobacco.

Imports of grains and products declined, from \$205 million in 1987 to \$185 million in 1988. Overall imports of oilseeds also declined, but imports of U.S. oilseeds increased from \$14 million to \$17 million, or 66 percent of market share.

Imports of feedstuffs were up, from \$504 million to almost \$594 million. Tobacco imports were lower, declining from \$99 million to \$82 million.

Danish exports increased about 2.5 percent in volume in 1988. On a value basis, they were up 0.9 percent to \$6.6 billion. This nearly unchanged export value figure was due to a decrease in EC export restitutions of nearly 7 percent. Primary exports were dairy products, beef, veal, pork, grains, sugar, and animal products.

The export value of dairy products was unchanged from 1987, although volume decreased by about 2 percent. The market conditions for dairy products generally were better

in 1988 than in 1987. Exports to the traditional markets of the United Kingdom and West Germany declined slightly, although Arab countries took a larger share than usual.

Cheese exports declined nearly 10 percent by volume, and condensed milk exports declined 18 percent.

Beef and veal exports increased 4 percent by volume and about 9 percent in value. Although exports to Italy, the primary market, decreased slightly, exports to West Germany and the United Kingdom outweighed the decline. Exports to third countries decreased.

Pork exports remained unchanged from 1987. A decrease in canned pork exports was offset by an increase in fresh pork exports. Fresh pork exports to Japan, Denmark's largest market, increased 33 percent to 126,000 tons.

Canned pork exports to the United States decreased by 13 percent to 53,271 tons. Total exports of canned pork decreased by 4 percent in value and 3 percent in volume. Exports to the second major market, the United Kingdom, decreased by 6 percent in volume but increased by 10 percent in value.

Exports of total crop products increased by 5 percent in value. Exports rose especially during the last quarter of the year due to larger grain exports, up 24 percent compared to 1987. Export value of grains increased by \$74 million (21 percent).

Sugar exports were down 8 percent by volume, although value increased by 33 percent to \$103 million.

In spite of larger exports of mink and fox furs of 23 percent by volume, the value decreased by 13 percent to \$431 million. Price conditions have been poor as a consequence of decline in the dollar exchange rate and a mild 1987/88 winter. According to the Danish fur auctions, the decline is due also to considerable overproduction of furs. ●

Ecuador

Profile of agriculture

Ecuador, located on the Equator, is a big producer of tropical products. It is the world's largest exporter of bananas and a major exporter of cocoa beans. Coffee, cocoa beans, and potatoes are the principal crops. Beef and dairy are the principal livestock enterprises. Agriculture provides 17 percent of the gross domestic product, employs 34 percent of the labor force, and accounts for over a fourth of the value of exports.

Ecuador's agricultural sector registered almost 9 percent growth in 1988, the only significant "nonoil" growth in the Ecuadorian economy, which registered 12 percent growth.

Production highlights

Estimates for 1988 indicate stagnant or declining production of most crops for domestic consumption including wheat, rice, corn, potatoes, and soybeans. Planted area

was down due to inadequate production incentives, high input costs, tight farm credit availability, and an inefficient marketing system.

Production of export commodities fared better in 1988. Although banana production declined somewhat, cocoa production was up 25 percent, and coffee, 14 percent.

Disease and insect problems pose serious threats to both coffee and cocoa production. These problems are exacerbated by the devaluation of the local currency, the sucre, which has made agricultural chemicals, most of which are imported, increasingly difficult to finance.

Ecuador's shrimp industry has been expanding rapidly in recent years, but slowed significantly during early 1989 due principally to climate problems.

Farm and food policy

Inflation control is the Government's key policy objective for 1989. The implication for agricultural policy will be a short-term emphasis on imports and a longer term emphasis on increased production through improved price incentives, expanded agricultural credit availability, and more efficient marketing.

The Government is attempting to influence prices at each stage of the production and distribution chain in order to offer producers prices high enough to stimulate production, while keeping consumer prices low enough to limit inflation. Consumer food prices rose about 95 percent in 1988.

The Government is increasing farm credit to try to prevent passing the soaring costs of production along to the consumer, without eroding the farmer's profit margin.

Imports and exports

Ecuador's total agricultural imports in 1988 surpassed \$120 million. Over 85 percent originated in the United States.



Ecuador at a Glance

Population (1988): 10.2 million

Urban population (1988): 5.7 million

Population growth rate: 2.8%

Per capita income (1988): \$747

Agricultural and pasture land area: 7.7 million hectares

Major crops: Bananas, rice, coffee, cocoa, African palm, potatoes, soft and hard corn, soybeans, cassava, sugar cane

Livestock sector: Beef, dairy

Leading agricultural exports:

Shrimp, bananas, coffee, cocoa

Leading agricultural imports:

Wheat, soybean oil, chewing gum base, cotton, sorghum, flavorings, modified milks, tallow

Agricultural imports as share of total imports: 7%

U.S. share of total agricultural imports: 85%

Percent of labor force in agriculture: 34%

In addition to increased wheat imports, relatively large volumes of rice, feed grains, and cotton (products in which Ecuador was virtually self-sufficient until 1987) were imported in 1988/89. In 1989, Ecuador imported around 70,000 tons of rice from the United States.

Ecuador recently became a net cotton importer. About 10,000 tons of cotton were imported in calendar 1988, with even larger imports projected for 1989. Lack of adequate

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Bananas	2,387	2,238
Cassava	131	132
Cocoa	58	77
Coffee	87	101
Corn, soft & hard	398	387
Palm crude oil	688	761
Rice	781	742
Soybeans	146	102
Sugarcane ¹	3,001	3,296

	1987
	<i>thous.</i>
Livestock numbers	
Beef cattle	565
Dairy cows	522

¹ Unprocessed.

**Value of Agricultural Imports,
July-June 1987/88**

Selected products	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Chewing gum base	3.6	9.8
Cotton	7.9	7.9
Flavorings	1.9	4.3
Modified milks	1.9	4.2
Sorghum	5.7	5.7
Soybean oil	10.4	10.4
Tallow	3.5	3.9
Wheat	63.0	63.0
Wines	.2	2.4
Total²	103.1	120.7

¹ Exchange rates are US\$1=308.88 sucres in the intervened market and US\$1=436.19 sucres in the free market. Includes commercial and concessional imports.

² Includes products not listed above.

financing is the main reason for the cotton deficit.

Ecuador continues to be primarily a market for bulk commodities. Prospects for agricultural imports in coming years include rice as well as increased imports of wheat, corn, and cotton.

The outlook for wheat imports is mixed. The Government has increased import quotas from 30,000 tons to 33,800 tons per month, after having eliminated its import subsidy. However, the resulting 140-percent increase in flour prices is expected to hurt consumer demand. Demand for wheat for feed for the shrimp sector likely dropped during the first half of 1989 due to lower shrimp production. Protein meal imports also are needed by the poultry and shrimp sectors.

The Government has announced plans to import approximately 50,000-60,000 tons of sugar in 1989.

Vegetable and fish oil and tallow imports are expected to be close to 1988 levels at about 25,000 tons and 7,000 tons, respectively.

Prospects for the import of live animals and embryos are clouded due to the sucre's devaluation. Genetic improvement is more likely to be pursued through semen imports and mating the progeny of cattle imported from the United States.

Prospects for U.S. agricultural sales to Ecuador in 1989 are excellent for bulk commodities but clouded for high-value products. U.S. sales of wheat, rice, vegetable oil, cotton, tallow, and sorghum to Ecuador should be well above the \$100-million mark in 1989.

The United States is more than likely to maintain its dominance in Ecuador's agricultural import market, due to its ability to provide 3-year financing in the form of credit guarantees.

Agriculture represents Ecuador's leading source of foreign exchange revenue. Agricultural exports accounted for about half the value of total exports in 1988. Traditional export crops—coffee, bananas, and cocoa—along with the burgeoning shrimp industry, account for 95 percent of Ecuador's total agricultural exports.

Ecuador exported nearly 56,000 tons of shrimp in 1988, up 12 percent from a year earlier, making Ecuador the world's second largest shrimp exporter.

Coffee export earnings decreased from \$211 million in 1987 to \$170 million in 1988 because of disease, insect, and weather problems.

Banana export earnings increased in 1988, because of bad weather in competitor nations.

The United States is the most important market for Ecuador's agricultural exports, accounting for approximately 54 percent of banana exports, 62 percent of cocoa exports, 57 percent of coffee exports, and 93 percent of shrimp exports. In all, over 70 percent of Ecuador's agricultural exports are purchased by the United States.

Trade policy and prospects

Ecuador will continue to import basic food products to meet internal demand. Imports of food and agricultural products not considered essential will be discouraged through high tariffs, and in some cases outright bans, as has been the case in the past. The Government will continue to encourage "nontraditional" exports such as wood products, flowers, and fruit. A policy of tighter border control to minimize illegal trade has been announced.

Devaluation of the sucre has made imported products considerably more expensive. This has cut imports of high-value products that are not considered absolutely essential, such as live animals.

The Government eliminated its wheat import subsidy in 1988 to reduce spending and to spur local production. The immediate effect was a 140-percent increase in wholesale flour prices and a 70-percent increase in the procurement price for domestic wheat.

The Government also expanded wheat import quotas from 30,000 tons per month to 33,800 tons to dampen retail price inflation by providing ample supplies.

Exporters must sell dollars acquired at an intervention exchange rate that is below the free-market exchange rate. This requirement, in effect, serves as an export tax and is a disincentive for agricultural export activity. ●

Egypt

Profile of agriculture

Agriculture is the largest employer in Egypt and a major contributor to gross domestic production. More than one-third of Egypt's labor force is engaged directly in farming, and many others are engaged in processing or trading of agricultural products.

All but a tiny part of Egyptian agriculture takes place on some 2.5 million hectares (6 million acres) of fertile soil in the Nile Valley and Delta. Although some desert lands are being reclaimed for agriculture, other more fertile soils in the Nile Valley and Delta are being lost to urbanization and erosion.

Egypt's climate and the ready availability of water, especially since the building of the Aswan Dam, permit multiple cropping of several crops a year on the same piece of land. This, in effect, almost doubles the actual crop area per year. Although improvement is possible,

agricultural productivity is high, considering the traditional methods used. Most land is owned privately, although the Government has a pervasive role in providing key inputs, regulating certain crop prices, determining cropping patterns, and marketing certain crops.

Major crops grown for domestic consumption are wheat, maize, horse beans, rice, sugarcane, and onions. Principal export crops are cotton, citrus, potatoes, and certain medicinal and aromatic plants.

Production highlights

With the removal of many production and price controls in 1987 and 1988, Egyptian farmers were freer to plant crops on the basis of their profitability. Production of wheat was a record-large 2.8 million metric tons in 1988 and is expected to be higher for the crop harvested in the summer of 1989. Corn production exceeded 4.0 million tons in 1988 and should set a record for the current season. Rough rice production of 2.1 million tons in 1988 was slightly below the previous year's level due largely to Government restrictions on irrigation supplies. Cotton production declined in 1988, mainly as a result of poor incentives and the low procurement price paid to farmers. Production of most other crops, including sugarcane, was at about the previous year's level.

Farm and food policy

The Government's goals for the agricultural sector have shifted over the years from one emphasizing self-sufficiency in food production to one of food security. This is because crop and livestock enterprises with heavy Government regulation and participation have not maintained adequate growth rates. In fact, some—such as cotton, sugar, and



Egypt at a Glance

Population (1988): 52.7 million

Urban population: 31.0 million

Population growth rate: 2.8%

Per capita gross domestic product (1988): \$600

Arable land area: 2.5 million hectares

Major crops: Major commodities grown for domestic consumption are wheat, maize, horse beans, rice, sugarcane, and onions. Principal export crops are cotton, citrus, potatoes, and certain medicinal and aromatic plants

Livestock sector: Major domestic animals are beef and dairy cattle, buffalo, sheep, goats, donkeys, and poultry. Principal imports are cattle, beef and beef products, tallow, and poultry

Leading agricultural exports: Cotton, citrus, potatoes, certain medicinal and aromatic plants

Leading agricultural imports: Wheat, wheat flour, vegetable oil, corn, tallow

Agricultural imports as share of total imports: 43.8%

U.S. share of total agricultural imports: 21%

Percent of population in agriculture: 33%

Agricultural Production		
	1987	1988
	mil. metric tons	
Crop production		
Corn	4.2	4.1
Rice	2.3	2.1
Sorghum	0.5	0.6
Wheat	2.4	2.8
	1987	1988
	thousands	
Livestock numbers¹		
Beef cattle	2,500	2,408
Dairy cattle	2,400	2,208
Goats	1,450	1,500
Poultry	13,000	12,000
Sheep	1,550	1,650
¹ Estimates as of July each year.		

¹ Estimates as of July each year.

rice—have declined significantly. As a result, agricultural self-sufficiency has slipped to about 50 percent and

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Beef and products	58	240
Corn	122	189
Dairy products	4	266
Feedstuffs	54	151
Forest products	20	815
Poultry	22	72
Sugar	2	147
Tea, coffee, spices	0	219
Tobacco		
and products	16	197
Wheat	232	906
Wheat flour	113	303
Vegetable oil	10	251
Total²	674	4,396

¹ Values are shown in U.S. dollars at US\$1=2.39 Egyptian pounds.

² Includes products not listed above.

food security has become the primary policy goal. Food security has usually meant the maintenance of at least a 90-day supply of basic commodities, especially those foodstuffs which constitute the consumer subsidy system.

Egypt's agricultural decision-makers made a number of significant policy changes in 1988. On the production side, the Government attempted to provide incentives to greater output by removing production controls or by raising procurement prices. Currently, only three crops remain controlled: cotton, sugarcane, and rice.

Reforms, however, have not always been smooth nor produced the desired result. For example, farmers continued to shift resources to higher valued crops, particularly animal feeds, at the expense of cotton and traditional food crops.

The Government also introduced an improved, higher-priced loaf of bread in order to decrease waste and to reduce the explicit subsidy on bread. Despite this effort, wheat stocks have dwindled, causing concern over supply prospects.

Imports and exports

Wheat and wheat flour imports in 1988 were slightly below 1987 volumes as available credit remained constant but world prices nearly doubled. However, with wheat supplies at extremely low levels, more corn is expected to be imported to replace the wheat being used for animal feed.

Despite shortages of foreign exchange, Egypt increased vegetable oil imports significantly in 1988 in an effort to avoid the shortages which plagued consumers the previous year. Import restrictions on high-value products resulted in fewer arrivals of frozen chicken and beef offals. Marketing efforts by palm oil exporters led to a 30-percent decline in tallow imports.

On the export side, Egypt's shipments of cotton, the most important agricultural export, were one-third smaller in 1988 than the year before. Smaller production and ever-increasing domestic demand left little surplus to be exported.

Exports of citrus, mainly oranges, increased by 40 percent in 1988. Exports of other agricultural commodities, including onions, potatoes, and rice, were above the level for the previous season.

Trade policy and prospects

Egypt imports about half of the food needed to supply its rapidly growing population of more than 50 million people. Policies which promote a dependable imported food supply (about \$4 billion per year) to supplement the virtually stagnant domestic production are the Government's top priority. However, foreign exchange deficits severely constrain agricultural imports.

In 1988, the Government removed its subsidy on imported corn in an effort to reduce subsidies to agriculture and budget outlays. This led to the collapse of the inefficient poultry industry and also resulted in a sharp decline in corn imports. In an effort to protect the domestic industry, the Government banned imports of poultry. The Government also banned or restricted imports of beef and beef offals, and sugar, largely to conserve scarce foreign exchange. Import bans, however, will do little to serve Egypt's longer range plans to develop its own ability to export.

The United States has supplied about a fourth of Egypt's agricultural imports. ●

El Salvador

Profile of agriculture

El Salvador is the smallest Central American country and the only one without a coastline on the Caribbean Sea.

Agriculture contributes 23 percent to the gross domestic product and employs 34 percent of the labor force. Coffee is El Salvador's most important crop, while other primary agricultural products include beans, corn, cotton, rice, sugar, and wheat.

Military conflict in El Salvador has caused sharp declines in the production of most crops because anti-Government guerrillas attack agriculture as a means to sabotage the Salvadoran economy.

Salvadorans depend on basic grains, especially corn and wheat, as the staple of their diets. Of the

grains, only corn was relatively unaffected by the drought because most of it was harvested early.

Production highlights

Crop production was hurt in 1987/88 by a severe drought which reduced the bean, rice, and sorghum harvests.

Production of coffee, traditionally El Salvador's most important commodity, was up slightly in 1987/88 to 2.5 million bags, marking the first break in a continuous decline since the beginning of the 1980's. This success, however, did not continue in 1988/89 because of plant diseases and poor weather. Production is estimated to have reached only 1.6 million bags.

Corn production also experienced a small decrease in 1988/89, but was still good at 536,000 tons. Milled rice rose to 32,000 tons and sorghum production was 136,000 tons in 1988/89, a dramatic increase over the drought stricken 1987/88 crop.

Cotton and sugar production have decreased slowly in recent years as an effect of the internal conflict and land reform. Cotton production during 1987/88 was 10,000 tons, necessitating imports of 5,000 tons. Sugar production in 1988/89 reached only 173,000 tons, its lowest level in 15 years. Meanwhile, the tobacco crop hit a high of over 1,000 tons.

Red meat production experienced a slight drop during 1988. Tallow production was also down, reaching no more than 1,000 tons. Livestock and dairy production continue to be hurt by El Salvador's political and military problems, as well as by high production costs and low prices for beef on the international market.



El Salvador at a Glance

Population (1988): 5.3 million

Urban population: 43%

Population growth rate: 2%

Per capita income (1988): \$870

Arable land area: 5,594 square kilometers

Major crops: Beans, coffee, corn, cotton, sugar, rice, sorghum, wheat

Livestock sector: Dairy, livestock, poultry production

Leading agricultural exports: Coffee, cotton, shrimp, sugar

Leading agricultural imports: Vegetable oil, wheat, protein meal, corn

Agricultural imports as share of total imports: 10%

U.S. share of total agricultural imports: 55%

Percent of population in agriculture: 50%

Agricultural Production		
	1987/88	1988/89
	thous. metric tons	
Crop production ¹		
Coffee ²	2,510	1,600
Corn	580	536
Cotton	10	10
Rice	26	32
Sorghum	20	136
Sugar	190	173
Tobacco	990	1,070
<hr/>		
	1987	1988
	thousands	
Livestock numbers		
Beef cattle	1,100	1,200
Dairy cows	260	280
Hogs (1983)	450	450
Poultry	3,600	3,600

¹ Crop years are July-June.

² Thousand bags.

¹ Crop years are July-June.

² Thousand bags.

The Government estimates a national herd of 1.2 million head of beef cattle in 1988. In 1988/89, the poultry industry produced about 700 million eggs and 74 million pounds of poultry meat, 87 percent of which is from chickens and 13 percent from hens.

El Salvador's production of fruits and vegetables is increasing. In 1987/88, production included an

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Corn	0.5	N/A
Wheat	12.0	N/A
Vegetable oil	12.0	N/A
Total²	55.0	100.0

¹ Values are shown in U.S. dollars at US\$1=5 colones. Includes commercial and concessional imports.

² Includes products not listed above.

estimated 96,250 tons of oranges, 81,950 tons of watermelon, 28,227 tons of tomatoes, and 15,068 tons of pineapple.

Farm and food policy

During the 1980's, the Government has focused on agrarian reform. In the early 1980's the Government mandated the nationalization, and later transformation into cooperatives, of about 473 farms of more than 500 hectares each. The move affected a total of nearly 219,000 hectares. The Government has provided extension and financial assistance to the newly created cooperatives.

To boost agricultural production, the Government also offers producer price supports for basic grains such as beans, corn, rice, and sorghum, and regulates prices for such products as coffee, cotton, and sugar.

Imports and exports

El Salvador imports corn, oilmeals and vegetable oils, wheat, some rice, and some tobacco.

Despite good harvests, 35,000 tons of corn were imported in 1987/88 to compensate for the drought-reduced sorghum harvest.

Modest levels of local fruit and vegetable production are supplemented by large imports, \$17 million in 1987, mostly from neighboring Guatemala.

Total domestic demand for vegetable oil is running at 28,000 tons per year, requiring imports of about 27,000 tons. In recent years, the United States has provided some long-term credit for imports of cotton oil and soy oil.

The United States continues to be El Salvador's single most important trading partner. Fueled by high levels of economic assistance, El Salvador imported \$440 million from the United States in 1988. The chief agricultural commodities included grain, animal fats, protein meal, and vegetable oils. In turn, during 1988, El Salvador exported \$380 million worth of goods to the United States, particularly coffee, shrimp, and sugar.

Although production levels for most crops were down in 1987/88, agricultural export values improved. Coffee is El Salvador's most important export crop, and exports were valued at \$369 million in 1988/89.

Cotton exports diminished significantly in 1988 to \$1 million, while sugar exports were up 50 percent to \$18 million. Red meat exports to the United States, El Salvador's only market, were 951 tons in 1988, a decrease of 9 percent. Poultry exports to Guatemala, Costa Rica, Honduras, and Nicaragua totaled

34,620 dozen eggs and 1.9 million layers and broilers in 1988.

El Salvador is beginning to exploit its potential as an exporter of nontraditional products such as shrimp and fish. Exports totaled \$21 million both in 1987 and 1988.

Trade policy and prospects

The Government licenses all imports and, in an effort to stabilize the economy and encourage production, it has banned luxury imports. However, the list of banned luxury imports is gradually being reduced. Government agencies are in charge of all domestic and export marketing of sugar and coffee, and provide guaranteed prices to producers.

El Salvador received \$48.4 million in food assistance from the United States in 1988 under the U.S. Government's Food for Peace (P.L. 480) program.

El Salvador also imported \$17 million of U.S. commodities under U.S. credit guarantee programs.

El Salvador welcomes foreign investment with significant incentives and tax credits for investors. For example, current law allows foreign investment in all but small-scale enterprises, and guarantees full repatriation of profits for most ventures. The United States, with \$95 million, claims about half of all foreign investment.

Some of the most promising investment opportunities in El Salvador include processing and production of vegetables, fruits, and shrimp. ●

Finland

Profile of agriculture

Finland's agriculture generally accounts for 4 to 5 percent of its gross domestic product (GDP) and 10 percent of its labor force. Agriculture's contribution to the economy fell off markedly in 1987 and 1988, due to poor grain production. However, the drop did not hurt the Finnish economy too badly, as half of Finnish farmers receive incomes from sources outside of farming.

Finnish agriculture is based on small family-owned farms, averaging 12 hectares of arable land and 35 hectares of forest. Agricultural policy does not favor large farms, and there are restrictions against increasing cultivable land and numbers of livestock.

Farms are highly specialized. About half of Finland's farms are involved in dairy or grain production. About 8 percent of farms specialize in pigs and 14 percent in poultry. Dairy farms are predominant in eastern and northern Fin-

land, while grain production is concentrated on larger units in southern and western Finland.

The major share of gross agricultural returns is derived from milk, followed by beef and pork. These items together account for about 75 percent of gross returns. Grain and other plant products account for about 18 percent of returns, and poultry and eggs, 7 percent. Forestry is also an important component of Finnish farming.

High self-sufficiency levels in the early 1980's have been brought down since 1986. There are still expensive surpluses of milk, eggs, and, in sharply decreasing amounts, beef and pork, which have resulted in costly export subsidies and the need for mandatory supply controls.

Production highlights

Finland is self-sufficient in dairy products and meats, and also grains in good harvest years.

However, in 1988, for the second year in a row, grain production fell below average. Fall seedings of winter wheat and rye decreased due to unfavorable weather. Yields of barley, the most important feed grain in Finland, were down due to insufficient precipitation in the spring and early summer.

Although wheat and rye production in 1988 did not meet domestic requirements, prospects for 1989 appear good, as plantings in the fall of 1988 were more than double the year before. The extremely mild winter resulted in limited winterkill. Mild spring weather also favored 1989 spring plantings.

Milk production fell over 6 percent in 1988, mainly an effect of the two-price system instituted for milk delivered to dairies, and the reduction in the number of dairy cows.



Finland at a Glance

Population (1988): 4.9 million

Urban population: 2.9 million

Population growth rate: 0.50%

Per capita income (1988): \$17,408

Arable land area: 26,962 square kilometers

Major crops: Cereals, sugar beets, potatoes

Livestock sector: Dairying, animal husbandry

Leading agricultural exports: Forest products, unprepared hides and skins

Leading agricultural imports: Foodstuffs, fodder grain

Agricultural imports as share of total imports: 9.2%

U.S. share of total agricultural imports: 7.0%

Percent of population in agriculture: 9.4%

Beef production decreased 10 percent and pork production was down 4 percent. During some periods of the year, beef production fell far enough below domestic demand to necessitate imports.

Farm and food policy

The basic goals of Finnish agricultural policy are to develop farm income while holding consumer prices at a reasonable level, ensuring self-sufficiency in basic foodstuffs, developing the structure

Agricultural Production

	1988	1989
	<i>thous. metric tons</i>	
Crop production		
Barley	1,612	1,710
Oats	857	1,160
Potatoes	855	750
Rye	49	160
Sugar beets	1,005	750
Wheat	285	470

	1988	1989
	<i>thous. metric tons</i>	
Livestock production		
Beef and veal	111	104
Milk	2,753	2,683
Pork	168	169
Eggs (million)	1,304	1,258

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions ¹</i>	
Selected products		
Apples	8	36
Bananas	0	41
Chocolate candy	0	39
Coffee	0	176
Fishmeal	0	42
Oranges	0	53
Soybeans	32	61
Tobacco	23	36
Wheat	10	17
Wood products	15	670
Total ²	136	1,939

¹ Values are shown in U.S. dollars at US\$1=4.19 finnmaks. Includes commercial and concessional imports.

² Includes products not listed above.

of agriculture, and maintaining the rural population.

Finland's agricultural policy has succeeded in transforming agriculture since World War II into a more productive sector and reducing Finland's dependence on imports. Nevertheless, the support system has resulted in both relatively high food prices and export subsidies, the latter paid largely by the Government.

Agricultural prices in Finland are regulated. Prices are set twice a year, following discussions among farmers, their organizations, and the Government.

Spring negotiations take into account cost increases from the

previous fall settlement, the development of farm income measured as the difference between target prices and actual prices received, and the development of income for other groups in society. The fall settlements are much more limited; incomes are not negotiated and capital costs are not taken into account.

The Farm Income Act remains in effect until the end of 1989. A Government committee has proposed a new Act that would be in accordance with the current Act, but exportable supplies would be reduced, and producers would absorb increased export costs.

Supply controls have dominated agricultural policy, resulting in reductions in surpluses.

In 1985, the Government instituted a dual-price system for milk. The system's long-term goal is to reduce dairy cows to 550,000 by 1990 from 628,000 in 1985.

The system established production ceilings on milk deliveries for each dairy farm. It set quotas for all producers normally delivering over 30,000 liters of milk per year. Deliveries above quota are penalized by a reduction in price.

Imports and exports

Finland's largest import by value was coffee, valued at \$176 million in 1988. Fruits and vegetables and soybeans are other big imports.

Finland's agricultural imports from the United States in 1988 totaled \$136 million, up \$20 million from 1987. Soybeans, raw tobacco, wood products, and wheat were the leading items. Finland also imported a significant amount of fruit from the United States.

For the first time in many years, some U.S. beef was imported, as Finnish production could not meet demand.

Finland exported \$664 million in food and agricultural items in 1988, down considerably from \$865 million in 1987. About 11 percent went to the United States, mainly furskins, cheese, chocolate candy, and pork.

Finland's largest export item in 1988 was unprepared hides and skins, valued at \$237 million. Of this, the United States took \$24 million.

Sugar and sugar product exports were up, from \$19 million in 1987 to \$37 million.

Exports of a number of commodities declined in 1988. Dairy product exports were down because of decreased milk production. Meat and meat products and grain and grain product exports were both down due to smaller production.

Trade policy and prospects

Finland is a member of the European Free Trade Association, a group of European countries that has eliminated tariffs on manufactured goods traded between member countries.

Finland uses extensive and expensive agricultural subsidies to finance exports of surplus production. It also applies trade regulations, primarily import licensing, to protect agriculture from competitive imports. ●

France

Profile of agriculture

A favorable climate, large tracts of fertile land, and the application of modern technology have combined to make France the leading agricultural producer in Western Europe. France produces a wide variety of products, including grains, oilseeds, meat, dairy products, and wine. It is basically self-sufficient in agricultural products, except for feed proteins and tropical products. A member of the European Community (EC), France accounts for about one-fourth of total EC farm production and nearly one-third of all agricultural land within the Community.

French agriculture has developed rapidly in recent years, due to high and stable prices and national farm investment policies. The agricultural population has been greatly reduced and the size of the average farm has increased.

Agricultural Production

	1987 thous	1988 metric tons
Crop production		
Butter	569	523
Grains	52,600	56,250
Nonfat dry milk	603	468
Oilseeds and feed pulses	7,079	7,544

Livestock numbers ¹

	1987 thousands	1988
Cattle	22,171	21,052
Beef	3,196	3,139
Dairy	6,359	5,569
Hogs	12,063	11,915
Poultry (layers)	60,000	60,000
Sheep	10,580	10,360

¹ Estimates as of January 1 each year.

Twenty-two percent of French farms exceed 40 hectares, and account for about two-thirds of farm sales. However, over half of French farms are smaller than 20 hectares and these farms produce only 14 percent of the national farm output.

Production highlights

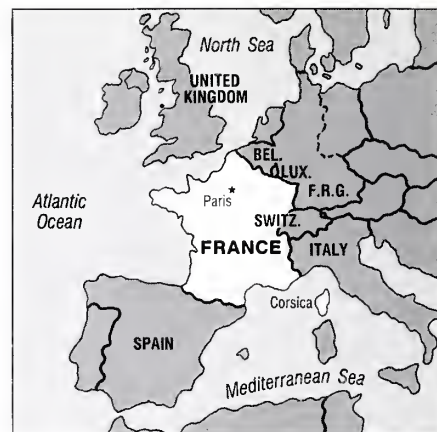
Generally favorable weather and improved yields in the crop sector enabled French agriculture to produce record crops and achieve record agricultural exports in 1988. French grain production increased in 1988, due to a record corn crop and the second largest wheat crop.

French production of oilseeds and other protein crops, namely feed pulses and alfalfa, has been rising sharply for the past decade, mainly due to higher EC support prices for these crops compared to grains. A major change occurred in 1989 when farmers reduced oilseed planting by 20 percent relative to 1988 because of drought problems and lower support prices resulting from the implementation of the EC stabilizer system.

The decline in 1989 oilseed area affects rapeseed and sunflowerseed. Production of soybeans and feed peas is expected to continue to rise in 1989.

Beef production is declining, after four years of strong increases, as the culling of dairy herds caused by the EC Dairy Reduction Program has slowed. Beef production is expected to continue to decline, due to the young age of the current beef herd.

Milk production is declining and French farmers are leaving dairying as a result of the EC dairy reduction program and the French national dairy buy-out program. Reduced milk supplies and the greater profitability of processing milk into cheese and other dairy products is expected to lower nonfat dry milk and butter production.



France at a Glance

Population (1988): 55,798,282

Urban population: 40 million

Population growth rate: 0.35%

Per capita income (1988): \$13,020

Arable land area: 175,049 square kilometers

Major crops: Cereals, sugar beets, potatoes, wine grapes

Livestock sector: Beef and dairy

Leading agricultural exports: Food products, wines

Leading agricultural imports: Food products, feed protein

Agricultural imports as share of total imports: 12%

U.S. share of total agricultural imports: 3.5%

Percent of population in agriculture: 6.9%

Pork production fell in the last quarter of 1988, alleviating a surplus, which resulted from domestic overproduction and increased imports from other EC countries that outpaced a rise in French pork consumption.

The poultry industry could face a similar oversupply crisis in 1989, unless production can control a tendency to overproduce. The outlook is for increasing domestic demand of poultry products, particularly for turkey and cut product, at the expense of red meat consumption.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Beverages	13	936
Dairy and eggs	1	1,135
Fresh vegetables	19	2,078
Fresh fruits	133	1,004
Meat and offals	143	2,890
Oilseed meals and other feeds	143	1,374
Tobacco	13	862
Wood and products	78	1,699
Total²	860	21,099

¹ Values are shown in U.S. dollars at US\$1=5.96 francs. Includes commercial and concessional imports.

² Includes products not listed above.

French wine production was down slightly to 64.8 million hectoliters in 1988. This level represents an even larger decline of 15 percent from the 1985-87 average. The drop in production is of ordinary table wine, resulting from reduced bearing area and unfavorable weather.

Farm and food policy

French agricultural policy focuses on protecting farm incomes and expanding production and exports to benefit trade balances.

The EC's Common Agricultural Policy (CAP) has effectively maintained farm incomes and stimulated production, but at the cost of high consumer prices and increasing budget costs. Because of its natural comparative advantage in the production of many agricultural commodities, France resists attempts to modify the CAP through general

imposition of production controls, particularly in crops.

The Government also directly assists farm incomes through tax concessions, subsidized credit, and social security programs. French national expenditures on agriculture are among the highest in the EC. Social security programs account for the major share of these expenditures.

Imports and exports

France's agricultural imports increased 6 percent to \$19 billion in 1988. The rise reflects strong consumer demand for certain high-value products. France remains a major customer for feedstuffs and grain byproducts, despite large domestic and EC supplies. However, French imports of oilseeds for crushing and major grains were down, due to increasing self-sufficiency in these products.

French imports of U.S. food and agricultural products were down 4 percent in 1988 to about \$800 million. The United States supplies about 5 percent of French agricultural imports, chiefly bulk agricultural products such as soybeans and feedstuffs.

U.S. exports of high-value products to France totaled \$178 million in 1987, about 2 percent of the French high-value import total. Traditional French high-value imports from the United States include meats and offals, fresh fruit and vegetables, coffee, teas, and a wide range of processed food items. However, as of January 1, 1989, France was obliged to cut off its imports of U.S. meats and offals due to the EC's ban on meats raised with growth hormones.

France is the world's second largest exporter of agricultural products and is a major exporter of high-value food products. It is a major competitor of the United States.

Food, beverage, and agricultural product exports make up almost 17 percent of all French exports, with agriculture's share increasing in recent years. The major portion of French agricultural exports stay within the EC.

Agricultural exports jumped by nearly 12 percent in 1988 to a record \$28 billion. Processed food exports had a banner year, totaling over a record \$13 billion, a 19-percent increase over 1987. The agricultural export sector was singled out as being one of the most dynamic areas in the French economy in 1988, and the export number reflects the high-value nature (wines, spirits, and cheeses) of French agricultural trade.

In 1988, France exported over \$1 billion worth of food, agricultural, and beverage products to the United States.

Trade policy and prospects

Agricultural exports are critically important to alleviate the French trade deficit; agricultural exports have been called the "green petroleum" of France.

Agricultural trade with France is governed by a complex system of EC duties, import restrictions, variable levies for feed grains, wheat, and rice, and special levies that apply to processed products containing sugar, flour, or milk. EC export subsidies are available for these and other products whose internal support and market prices would otherwise prevent them from competing in world markets.

The EC's CAP provides high prices for French agriculture by setting levies and duties on competitive imports at a level that ensures those commodities will not be sold for less than the domestic support level. Consumption and export subsidies dispose of surplus domestic production. ●

German Democratic Republic (East Germany)

Profile of agriculture

Agriculture in the German Democratic Republic (GDR)—East Germany—is 95-percent collectivized, consisting of cooperatives and state farms. The crop-producing collectives average 5,000 hectares, and the livestock-producing collectives are evolving toward highly concentrated units.

The major crops are wheat, barley, rye, potatoes, sugar beets, and rapeseed. Yields have increased steadily during the past 25 years and are generally higher than those of other East European countries, but they lag behind levels reached in Western Europe. East Germany is a regular importer of grain and other agricultural products.

The livestock sector consists of cattle, hogs, sheep, and poultry raised on corn silage, hay, potatoes, feed beets, and oilseed products.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Grains, total	11.2	10.0
Barley	4.2	3.8
Wheat	4.0	3.7
Potatoes	12.2	11.5
Rapeseed	0.4	0.4
Sugar beets	7.7	0.4

	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Cattle	5.7	5.7
Dairy cows	2.0	2.0
Hogs	12.5	12.5
Poultry	50.7	49.4
Sheep	2.7	2.6

¹ Estimates as of January each year.

Agriculture and forestry employ 10 percent of the labor force and contribute about 8 percent percent of the national income.

Production highlights

The agricultural sector had a bad year in 1988, one of the worst in a long time. The vagaries of the weather in 1988 included floods, late frost, and drought. Overall agricultural production was down 8 percent compared to 1987.

The grain harvest of almost 10 million tons was 10 percent below the 1987 output and 14 percent below the planned harvest of 11.6 million tons. The average grain yield per hectare was 4 tons with the best farms yielding 6 tons.

Dry weather during harvest reduced crop losses and enhanced grain quality. While domestic food requirements were met, increased imports were needed for the feed industry.

The sugar beet harvest was also hurt by the bad weather. Yields were so low that some processing plants shut down early. At 23.4 tons per hectare, the sugar beet yield was the lowest recorded.

Fodder crops such as hay also suffered from the drought, so that supplies for the mixed feed industry were tight through the 1988/89 winter.

The potato crop was not hurt as badly as other crops in 1988. The average yield was 25.9 tons per hectare, better than the 5-year average of 22.7 tons per hectare.

Livestock production was insulated from the shortfall in the grain harvest by increased imports of feedstuffs and by mild winter weather, which reduced the energy requirements of the herds. Herd sizes are getting smaller, as the average output per animal increases.

Livestock breeders are trying to improve the genetic characteristics of



GDR at a Glance

Population (1988): 16.6 million

Urban population: 2.3 million

Population growth rate: -0.06%

Per capita income (1988): \$9,203

Arable land area: 47,641 square kilometers

Major crops: Wheat, barley, rye, potatoes, sugar beets, rapeseed

Livestock sector: Cattle, hogs, sheep, poultry

Leading agricultural exports: Sugar, beer, grains

Leading agricultural imports:

Cotton, oil meals and cakes, wheat, corn, coffee, meats

Agricultural imports as share of total imports: 3%

U.S. share of total agricultural imports: 8.2%

Percent of population in agriculture: 10%

their herds through artificial insemination and embryo transfers. The emphasis in management of dual-purpose herds is shifting away from milk production to meat production.

Fruit and vegetable production remained below expectations. The bad weather was devastating to fruit trees. Some vegetable fields are irrigated, but the drought reduced the harvest, so that supplies for processing were down.

To achieve the planned harvest goal of 11.6 tons, the planted area of grains increased in 1989, with an

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Barley	3	125
Corn	58	1100
Cotton	1	150
Offals, edible	2	N/A
Wheat	4	50
Total²	70	850

¹ Values are shown in U.S. dollars at US\$1=1.75 marks. Includes commercial and concessional imports.

² Includes products not listed above.

expected average yield of 5 tons per hectare. However, a significant increase in inputs is not expected. Planners are relying on better weather and better management practices to produce a larger harvest.

Although statistics are scarce, it seems that the output of private agricultural units continues to climb. In 1988/89, the private units fared better than the socialist enterprises. However, the rate of growth was slower than in the past.

Food and farm policy

Since the early 1970's, vertical integration of cooperative and State farms has been pursued in accordance with a policy aimed at industrializing agricultural output. Wholesale purchase, transport, and storage of agricultural products are concentrated in Government enterprises. Application of fertilizers and plant protection agents is provided by cooperative agro-chemical

centers, while agricultural machinery is serviced by State-owned stations. Most land improvement and rural construction work is performed by interfarm cooperative organizations.

The availability of inputs remains restricted. Planners tend to distribute inputs on a district level, leading to a lack of resources in some areas and on some farms.

The Government hopes that computer-aided management will help increase yields and output. Over 1,700 computers are used on cooperative and state farms to help manage grain enterprises, collect data on soil fertility, and manage stock levels. Computers are also used to manage livestock enterprises, greenhouses, and storage facilities.

Special cooperative councils consisting of one grain farm and three livestock farms are becoming more influential in the management of the 1,250 cooperative councils which account for the larger part of agricultural production.

Policymakers and planners emphasize improving agricultural output through the practical application of scientific and technical research. However, the introduction of new technologies has not been as fast as the planners would like.

Problems have arisen in educating farmworkers and in receiving resources for new procedures. Most often, investment in new technologies must be financed at the local level and financial incentives to upgrade facilities are dampened by a rigid pricing system and planning expectations.

Most food processing facilities—especially for meat, milk, vegetables, and fruit—are managed at the district level. In the past, there have been problems with the quality and distribution of raw agricultural products to processing plants.

Imports and exports

In 1988, the GDR imported an estimated \$850 million worth of agricultural products including grains, cotton, oil meals and cakes, coffee, meat, and other products. About 8 percent of that came from the United States. Agricultural exports amounted to \$550 million, including sugar, beer, spirits, and grain. Less than 1 percent were to the United States.

Although sugar is the top East German agricultural export, it is expected that imports will be necessary in 1989 because of the poor 1988 sugar crop.

Trade policy and prospects

The GDR continues its drive to increase exports and decrease imports to reduce its debt load, especially to western banks. In 1988, the GDR posted an overall foreign trade surplus, but total trade levels have stagnated.

Foreign trade is State controlled. The authority to import and export is given to specialized State trading agencies or companies under the control of the Ministry of Foreign Trade.

Strict control over trade is one of the greatest impediments to U.S. agricultural exports to the GDR. ●

Germany, Federal Republic of (West Germany)

Profile of agriculture

West Germany's agricultural sector accounts for only 2.1 percent of gross national product. Only 8 percent of the agricultural labor force is hired, full-time labor. Farm family members account for 88 percent of all labor in agriculture. The remainder are part-time or seasonal workers.

Two-thirds of West German farmowners are over 45 years old. Of these, 26 percent have no successors. Additionally, many retiring farmers are not selling their land to other farmers. For these reasons, the annual rate of decline in the number of farms is likely to increase.

As a result, the total labor force employed in agriculture will continue to decline as well.

Although land consolidation schemes have increased the average farm size over the past decade, many West German farms are quite small, averaging only 40 acres. This small average farm size will likely hinder improvements in competitive position and increased farm income.

Farmers attempt to offset the disadvantages of small operation by

intensive land use, and productivity is high. Dairy and beef farms account for 60 percent of the total land area devoted to full-time farms in West Germany. Principal agricultural products are milk, beef, pork, and grains.

Production highlights

Milk producer prices have increased markedly since last year. Also, slaughter cattle, which in West Germany are almost entirely a by-product of the dairy business, are achieving relatively high returns. These developments are observed with great relief by the Government as these sectors together account for about 45 percent of total cash receipts from farm marketings.

Grain production, particularly wheat, currently seems to be one of the most secure and profitable crops for German farmers. Grain area for the 1988 harvest expanded by 1.9 percent after several years of reduction.

Feed use of grains, which peaked in 1985/86 at 17.2 million tons, dropped in 1987/88 to a forecast 15.2 million tons as a result of a reduced grain crop, reduced livestock numbers, dairy quota restrictions, and a good forage supply.

The Soviet Union was the major customer for German wheat, taking 1 million tons of total German grain exports of 3.25 million tons. Some 850,000 tons, or one-fourth of sales, went to other EC countries. Of 4.53 million tons of total grain imports, only 820,000 originated in non-EC countries. Some 390,000 tons were imported from East Germany and 254,000 (mostly corn) from the United States.

Farm and food policy

As an original member of the EC, West Germany's national agricultural policy is largely aligned with EC policy and subsidy rules. This also applies to direct subsidies ap-



West Germany at a Glance

Population (1988): 61.1 million
Urban population: 55.6 million
Population growth rate: -0.3%
Per capita income (1988): \$10,680
Arable land area: 73,284 square kilometers
Major crops: Barley, oats, hops, potatoes, sugar beets, wheat
Livestock sector: Cattle, hogs, poultry
Leading agricultural exports: Beer, wine, wheat, canned fruits and vegetables, cocoa products, candies
Leading agricultural imports: Fruits, vegetables, tropical products, soybeans, tobacco
Agricultural imports as share of total imports: 13.4%
U.S. share of total agricultural imports: 1.5%
Percent of population in agriculture: 5.4%

pearing for the first time in the 1989 budget.

A substantial increase in budget appropriations for agriculture in recent years reflects the strengthening of national support for agriculture designed to offset farm income declines brought about by EC Council pricing policy.

Associated with income concerns is the desire to conserve the countryside and maintain the family farm structure.

The Government's major goal in the agricultural budget is to provide

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop production		
Barley	8.51	9.58
Oats	2.42	2.43
Potatoes	6.50	7.43
Sugar beets	19.04	18.59
Wheat	9.97	11.92

	1987	1988
	<i>millions</i>	
Livestock numbers		
Beef cattle	1.68	1.61
Dairy cows	5.39	5.08
Hogs	24.50	23.67
Poultry	47.90	47.20

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Corn	8.17	347.52
Fruits	55.14	1,873.43
Meat		
and products	9.39	3,343.39
Soybeans	502.10	781.96
Tobacco		
and products	227.82	719.75
Vegetables,		
herbs	8.91	2,137.44
Wheat	2.82	389.30
Total ²	1,652.47	32,212.13

¹ Values are shown in US\$1=1.76 marks.

² Includes products not listed above.

social support for its agricultural sector and to provide a financial base for small-farm families unable to earn a satisfactory income.

The partial renationalization of agricultural policy in the EC is favored because it would allow Germany to directly assist farm incomes without bearing costs for similar programs throughout the EC.

The Government also has established programs designed to limit overproduction, including land set-aside. In addition, farmers over 56 years old may apply for early retirement support, provided they take their land out of production or make it available to other farmers. The Government estimates that about 27,000 farmers will enroll in this program.

Imports and exports

West Germany is the largest importer of food and agricultural products in the world, importing over \$32 billion worth in 1988.

Agricultural imports include meat, fruits, vegetables, tropical products, oilseeds, and oilseed products.

Despite the depreciation of the dollar, U.S. shipments of farm products to West Germany declined in 1988 to about \$1.65 billion. Big declines were registered for imports of U.S. corn, soybean meal, wheat, and rice.

U.S. shipments of citrus and other tropical fruits increased significantly, however. There were also substantially larger purchases of U.S. corn germ meal and corn gluten meal. U.S. shipments of wine, though still small, tripled during 1988.

Although West German imports vastly exceed exports, the country's processing capability helps it remain the fourth largest agricultural product exporter in the world. Processed products include beer, wine, coffee products, apple juice, candies, and other sweets.

EC member states remain the best customers, receiving 72 percent of all West German agricultural exports.

Trade policy and prospects

West Germany's food and agriculture trade policy is influenced by its membership in the European Community. EC preference and protective import duties make it difficult for non-EC countries to compete in many individual food and agricultural product markets in West Germany.

In some instances, West German food laws are stricter than those of the EC. In fact, the country has one

of the most restrictive food laws in the world.

The law specifies required labeling, permitted additives, and various hygienic and veterinary requirements. The law also establishes standard sizes for product containers.

Various regulations specify the ingredients that are allowed in certain food products. For example, only animal products can be used to produce sausages, and cereal fillers or vegetable protein extenders generally are not allowed in the product.

The laws also set levels for natural ingredients in fruit juices and meat and milk products.

Among the various bilateral trade issues affecting U.S.-West German agricultural trade, the two most important ones in 1988 concerned nongrain feed ingredients and the EC hormone directive.

U.S. exports of nongrain feed ingredients to Germany are valued at \$220 million annually. Major items in this group are corn gluten feed, corn germ meal, and beverage by-products. There has been strong protectionist pressure from Germany to establish barriers against these imports. They argue that nongrain feeds displace grain in livestock and poultry rations, adding to the mounting surpluses on the highly protected EC grain markets.

Germany has consistently advocated a hard-line approach on implementation of the EC hormone directive through importing only a few million dollars' worth of meat products annually from the United States. ●

Ghana

Profile of agriculture

Situated on West Africa's Gulf of Guinea, Ghana is only a few degrees north of the Equator and has a tropical climate.

The country is mainly agricultural, consisting of many subsistence farms. Slightly more than half of the population and most workers are engaged in agriculture. The agricultural sector accounts for about half of the nation's gross national product.

Ghana's main food crops are cassava, yams, plantains, cocoyams, and corn. The cash crops consist primarily of cocoa and cocoa products, which provide about two-thirds of the nation's export revenues, plus forestry products.

Ghana's livestock industry is not large. The average Ghanaian consumes 2,000 calories daily, including 44 grams of protein of which 70 percent comes from plants, not animals.

Production highlights

Stimulated by favorable weather and better Government pricing policies, Ghana's agricultural sector grew an estimated 8.4 percent in 1988.

Good rainfall in 1988 resulted in an impressive rebound in cocoa production. While excess supplies on the world market led to lower world prices and disappointing returns, the Government of Ghana was able to increase producer prices moderately.

The Government has undertaken a program to improve cocoa seedlings and has reported replanting at a rate of 30,000 hectares annually. Although some wonder whether replanting is fast enough to counteract the aging of trees, the Government appears to be moving rapidly toward its production goal for cocoa at the 300,000-ton level.

The production of cassava, yams, and plantains each rose by about 20 percent in 1988.

Root crops, such as cassava and yams, account for about 44 percent of the value of the gross agricultural product. Plantains account for another 7 percent. This dwarfs the 7 percent of production provided by cereals.

Unlike the year before, Ghana enjoyed a good grain harvest in 1988 and cereal production slightly exceeded storage capacity. Corn output rose nearly 9 percent in 1988, going to 600,000 tons from 553,000 the year earlier.

Rice production also increased, gaining 18 percent to 95,000 tons.



Ghana at a Glance

Population (1988): 13.3 million

Urban population: 6.3 million

Population growth rate: 2.6%

Per capita income (1988): \$350

Arable land area: 136,000 square kilometers

Major crops: Cocoa, cassava, coconuts, coffee, corn, rice, plantains, yams and cocoyams, forest products

Livestock sector: Poultry, cattle, hogs, sheep, goats

Leading agricultural exports: Cocoa and products, pineapples, nuts, yams, forest products

Leading agricultural imports: Wheat, cotton, rice, nonfat dry milk, vegetable oil

Agricultural imports as share of total imports: 10%

Percent of population in agriculture: 53%

The outturn of sorghum and millet jumped from 271,000 tons in 1987 to around 300,000 tons in 1988.

Farm and food policy

Ghana has been following a policy of economic reform since 1983, operating under guidelines recommended by the World Bank and the International Monetary Fund.

Agricultural Production

	1987	1988
	thous. metric tons	
Crop production		
Cassava	2,943	3,300
Cocoa	188	290
Corn	553	600
Plantains	1,005	1,200
Rice	81	95
Sorghum/millet	271	300
Yams	1,001	1,200

Crop production

	1987	1988
	millions	
Livestock numbers ¹		
Cattle	1.2	1.2
Goats	1.9	2.0
Hogs	0.50	0.53
Poultry	8.2	8.5
Sheep	2.0	2.1

¹ Estimates as of April each year.

Value of Agricultural Imports, 1987

Selected products	Imports from
	United States \$ millions ¹
Cotton	6.3
Rice	3.4
Soybean oil	0.7
Wheat/flour	3.0
Total²	20.0

¹ Values are shown in U.S. dollars at U.S.\$1=202 cedis. Includes commercial and concessional imports.

² Includes products not listed above.

The major agricultural objectives are:

- Self-sufficiency in the production of cereals, starch tubers, and animal protein;
- Maintaining adequate buffer stocks of grains;
- Self-sufficiency in industrial raw materials, such as cotton, oil palm, tobacco, and peanuts;
- Increased output of cocoa and other exportable crops; and
- Improved storage, processing, and distribution systems to minimize post-harvest losses.

Guaranteed minimum producer prices have been increased for most major crops. The price increase for cocoa is the most significant because of its importance to the economy and to the actual control of marketing by the Cocoa Board.

Other key elements in this policy include devaluation of the currency, improved infrastructure

and extension services, reduced subsidies, and a smaller Government presence in direct production efforts resulting in more movement toward privatization.

Nevertheless, the Government still has more than 181 state-owned farm enterprises and is a minority shareholder in 54 others. But the Government is gradually relinquishing some large-scale farming operations and the Cocoa Board is selling a number of its farms.

Imports and exports

On the import side, Ghana normally needs about 100,000 tons of wheat per year. Several new grain storage plants have been built or are nearing completion, which will enhance the nation's ability to store the annual harvests and to import.

Despite expansion in lint cotton production, Ghana still must import about half of its needs. Also, Ghana imports most of its dairy products.

Because of its low income levels, Ghana's consumption of vegetable oils is much lower than it is in several other West African countries. Traditionally, Ghanaians have used unprocessed red palm oil gathered from wild groves.

Virtually all peanuts are used for human consumption, not for crushing for peanut oil. In early 1989, Ghana imported some 25,000 tons of soybean oil from the United States under the Food for Peace (P.L. 480) program.

Cocoa and cocoa products provide the bulk of Ghana's agricultural exports each year. The forestry industry, which generates 5 percent of the gross national product, also contributes substantial exports. Ghana exported 257,000 cubic meters of logs, 142,000 of sawn timber, 13,000 of veneer, and 1,000 of plywood in 1987.

In October 1988, a new export terminal opened in the coastal town of Tema, near the capital Accra, adding to the country's export capacity.

Trade policy and prospects

Despite the bad harvest of 1987 and low cocoa and gold prices on international markets, Ghana is continuing its drive toward trade liberalization.

Although the pace of raising the standard of living is slow, the long-term outlook bodes well for continued economic growth, expansion in agricultural production, and a gradual recovery of the overall economy.

In 1988, about three-fourths of Ghana's export earnings went for debt service. As high-interest loans are paid off, this proportion is expected to drop. By the early 1990's debt service is expected to fall below 30 percent of export earnings, giving the country more financial breathing room in rebuilding the economy and expanding trade. ●

Greece

Profile of agriculture

Agriculture is a significant component of Greece's economy. It comprises almost 17 percent of the gross domestic product and involves 29 percent of the workforce.

Greek agriculture is characterized by small, fragmented holdings, an aging self-employed labor force, and the production of products such as olive oil, fresh fruits and vegetables, wine, and tobacco. Products such as cereals and milk, beef, and veal contributed 26 percent to total agricultural production in 1985.

About 68 percent of all farms are 1-5 hectares, while only 0.5 percent of the farms are more than 50 hectares.

Agricultural Production

	1988	1989
	<i>thous. metric tons</i>	
Crop production		
Alfalfa	1,800	1,820
Barley	680	589
Corn	1,950	2,000
Cotton	700	709
Oranges	780	600
Peaches		
and nectarines	611	580
Sugar beets	1,900	2,500
Tomatoes	1,156	1,150
Wheat	2,300	2,300

	1988	1989
	<i>thous. metric tons</i>	
Livestock production ¹		
Beef and veal	165	162
Poultry	150	150
Pork	123	126
Rabbit	5	5
Sheep and goat	84	85

¹ Estimates as of January 1 each year.

¹ Estimates as of January 1 each year.

Over 60 percent of Greek farmers depend on agriculture for their entire income.

Production highlights

Production increased by 8 percent in 1988, following a 2-year decline, as a result of good weather and high yields for both field and tree crops. Crop output increased by 9 percent, while the small animal sector showed a slight decline. The largest contributor to the increase was the tree crop sector, up almost 75 percent, due to the recovery of trees from freeze damage in 1987.

Citrus output was up nearly 40 percent in 1988, due to good weather that favored tree crops, particularly oranges and lemons. Deciduous fruit output was also up, including output of apples, pears, table grapes, peaches, nectarines, and apricots.

The Greek sultana (a grape grown for raisins and wine) crop reached 78,000 tons in 1988. This was almost double the 1987 level of 40,000 tons, due to favorable weather.

Cotton production was up to 700,000 tons, compared to 555,000 tons in 1987. Cotton area was expanded in 1988, taking over irrigated corn area.

Wheat area in 1988 was up less than 1 percent from 1987, reaching 875,000 hectares. It was comprised of 55 percent durum, and the rest, soft wheat. Soft wheat increased by nearly 9 percent compared to the 1987 crop, while durum was unchanged.

Tobacco production was up slightly, from 119,000 tons to 132,000 tons in 1988.

The production of fish has been on an upward trend since 1983, with an increase in 1987 of 8 percent over 1986. This was due to better weather, the addition of new vessels



Greece at a Glance

Population (1988): 10 million

Urban population: 7 million

Population growth rate: 0.26%

Per capita income (1988): \$3,950

Arable land area: 30,346 square kilometers

Major crops: Wheat, olives, tobacco, cotton, raisins, fruit

Livestock sector: Fish

Leading agricultural exports: Fruits

Leading agricultural imports: Meat, live animals

Agricultural imports as share of total imports: 30%

U.S. share of total agricultural imports: 4%

Percent of population in agriculture: 27%

to the fleet, and the modernization of old ones. Output of fish and seafood products was 120,000 tons in 1987.

Prospects for Greek agricultural production in 1989 are unclear because of drought conditions in late 1988 and early 1989.

Farm and food policy

Agricultural policy is principally governed by the European Community's (EC) Common Agricultural Policy (CAP). As a member of the EC, Greece received \$1.62 billion in agricultural financial support in 1988.

The CAP relies largely on a price support policy to maintain farmers'

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions ¹</i>	
Selected products		
Dairy products, eggs	0	409.1
Fruits and nuts	7.3	32.7
Grains	3.2	290.2
Logs and rough wood	14.6	160.4
Meat and edible offals	0.8	747.2
Misc. edible prep.	0.9	104.5
Oilseeds, seeds	34.9	73.6
Total ²	101.3	2,669.4

¹ Values are shown in U.S. dollars at US\$1=141.9 drachmas. Includes commercial and concessional imports.

² Includes products not listed above.

incomes. Although the method of price support varies somewhat from product to product, certain basic concepts apply everywhere in the EC.

Internal prices are maintained in two ways. First, levies and duties facing imported commodities which compete directly with EC production are set at a level that ensures those commodities cannot be sold at a price less than the EC support level. Second, the EC buys excess commodities in order to strengthen prices. Finally export subsidies are granted by the EC to allow surpluses to be sold on the world market.

Greece's major policy objectives include strengthening farmer cooperatives, restructuring production

toward crops with higher demand, especially livestock, reorganizing food processing, improving farming's infrastructure, and expanding irrigation.

Imports and exports

Greece imports most of its meat and dairy needs. In 1987, it imported \$747.2 million of meat and edible offals, and \$409.1 million of dairy products and eggs.

Grain imports totaled \$290.2 million, of which \$3.2 million came from the United States.

Log and rough wood imports were \$160.4 million in 1987, of which \$14.6 million, or 9 percent, came from the United States.

The United States supplied Greece with almost one-half, or \$34.9 million, of its oilseed imports of \$73.6 million.

In all, Greece imported \$101.3 million of agricultural products from the United States in 1987, while the United States took \$104.9 million worth of products from Greece.

The U.S. share of Greek exports was about 5 percent, with tobacco and horticultural products accounting for over 80 percent of the total. The United States supplied 4 percent of Greek imports, with soybeans, cotton, wood products, tree nuts, seeds, and pulses representing over 70 percent of the total.

Greece's largest exports, on a value basis, were of vegetable, fruit, and nut preparations, at \$446.5 million. Of this, the United States took \$20.3 million, or 5 percent.

Greece exported \$274.7 million of unmanufactured tobacco, of which the United States took 23 percent, or \$63.4 million.

Grains were also a big export item, totaling \$273.4 million in 1987.

Trade policy and prospects

One of Greece's primary concerns is its escalating agricultural trade deficit with the other EC member states. The deficit is due largely to Greek imports of livestock products.

Greece hopes to correct this imbalance by improving infrastructure and concentrating on producing products for which it has comparative advantage, such as out-of-season fruits and vegetables.

Greece is participating in General Agreement on Tariffs and Trade negotiations for the liberalization of trade within the framework of the Uruguay Round. Greece largely supports the EC position on agricultural trade matters and it expects the EC to protect Greek farmers. ●

Guatemala

Profile of agriculture

Guatemala is the most productive and populated Central American country. It has the third largest area, after Honduras and Nicaragua, but a 3-percent population growth rate is rapidly curtailing the potential for agricultural expansion.

The agricultural sector is the driving force of the Guatemalan economy, contributing 25 percent of the gross national product, about 75 percent of export earnings, and more than 50 percent of employment.

Guatemala's agricultural sector survives on both commercial and subsistence levels. The large, commercial production operations and their associated agri-industries are located primarily in the north and on the low-lying, fertile south coastal plain. The other operations, primarily located in the western highlands, are those of small subsistence producers growing beans, corn, and vegetables for home use.

Coffee production dominates the agricultural economy, but Guatemala produces a variety of other commodities. Besides producing a premium-grade coffee, Guatemala is the world's largest exporter of cardamom, a major producer of bananas, and a developing producer and exporter of shrimp, lobster, seafood, cut flowers, fruits, and vegetables. Rubber and sesame seed production are rising steadily as world market conditions improve.

Corn and edible beans are grown in every corner of Guatemala and are the staple food for many of the people, although Guatemala is not a major trader of these commodities on the world market.

In addition, Guatemala produces cotton, honey, rubber, sesame, sugar and molasses, tobacco, and wheat.

Poultry production is growing and with its lower price and ready availability, poultry has replaced beef as the popular meat choice.

Production highlights

Production for several commodities, including bananas, coffee, cotton, sesame, and wheat, dropped in 1988/89. Coffee production has been fluctuating for the past 3 years and in 1988/89 the crop yielded 2.9 million 60-kilogram bags, down from just over 3.0 million in 1987/88. Production for 1989/90, however, is estimated at 3.2 million bags.

Cotton plantings are on the rise after several years of sharp decline as a result of falling world prices and rising costs of production. Poor weather reduced the 1988/89 production to 42,000 tons, but production for 1989/90 is estimated at 59,000 tons.

The banana crop also had a poor year. Production was down from 20 million boxes in 1987/88 to 19 million in 1988/89.

Cardamom, however, had a successful year, as production rose to 10,000 tons. Production of corn, sorghum, sugar, and tobacco also increased in 1988/89. Beef produc-



Guatemala at a Glance

Population (1988): 8.7 million

Urban population: 41%

Population growth rate: 3.0%

Per capita income (1988): \$1,120

Arable land area: 108,430 square kilometers

Major crops: Coffee, bananas, beans, corn, cotton, livestock, sugarcane, cardamom

Livestock sector: Beef exports to the U.S.; pork and poultry production for domestic consumption

Leading agricultural exports: Coffee, bananas, cardamom, cotton, sugar, beef

Leading agricultural imports: Wheat, protein meals, tallow, vegetable oils

Agricultural imports as share of total imports: 12%

U.S. share of total agricultural imports: 61%

Percent of population in agriculture: 50%

tion rose in 1988 over the previous year to 57,000 tons, and pork production remained unchanged at 14,000 tons. Meanwhile, poultry is showing constant yearly increases, and in 1988 Guatemala produced 78,000 tons of poultry meat.

Food and farm policy

The Government maintains production incentives for essential agricultural commodities such as black beans, corn, wheat, and rice. These and other commodities receive direct Government support

Agricultural Production

	1987/88	1988/89
	<i>mil. metric tons</i>	
Crop production¹		
Cardamom	0.01	N/A
Coffee ²	3.02	2.93
Corn	1.22	1.30
Rubber	0.01	N/A
Sesame	0.02	0.03
Sugar	6.91	7.29
Wheat	0.05	0.04
	1988	1989
	<i>millions</i>	
Livestock numbers		
Beef cattle	2.6	2.6
Swine	1.1	1.1

¹ Production years are July-June for corn, rubber, and sesame; Sept.-Aug. for cardamom; Oct.-Sept. for coffee; Nov.-Oct. for sugar; and Dec.-Nov. for wheat.

² Million 60-kilogram bags.

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States suppliers</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Dairy products		
and eggs	6.3	15.7
Essential oils	3.2	9.8
Flour and		
grain products	4.1	6.1
Other grains	5.9	6.3
Tallow	12.1	12.1
Wheat	23.3	26.5
Vegetable oils	16.6	19.8
Total²	102.5	167.7

¹ Values are shown in U.S. dollars at US\$1=37 quetzales. Includes commercial and concessional imports.

² Includes products not listed above.

projects demonstrating the technologies of small-scale production, small-scale irrigation, land terracing, improved marketing infrastructure, and crop diversification.

Imports and exports

Imports are led by bulk commodities, especially protein meals, tallow, wheat, and vegetable oils. Guatemala also has been a marginal corn importer for more than 25 years. In 1988/89, Guatemala imported more than \$37 million of beverages, prepared food, wood products, and other high-value products.

The Government is pursuing a vigorous policy to make the country self-sufficient in staple grains, especially corn. However, Guatemala's rapidly growing population, growing demand for corn, and historically low yields are likely to force it to continue to import corn, except in good harvest years.

Nearly all of Guatemala's agricultural imports are from the United States, and since 1985 a substantial portion of bulk commodity imports have been financed under concessional and commercial assistance programs.

The Central American region constitutes the principal market for most of Guatemala's nonagricultural exports, while the United States is its chief market for agricultural products. Virtually every major export crop, as well as basic grains and several of the newer nontraditional exports, yielded higher export earnings in 1988. Exports were up sharply for cotton, fresh fruit, flowers, shrimp, sugar, and tobacco.

Coffee, which accounts for about 40 percent of Guatemala's export earnings, represents a major source of Government revenues. However, in 1989 only modest increases in coffee exports were apparent because of limitations imposed under the International Coffee Agreement.

Guatemala is the world's largest exporter of cardamom. Exports have more than doubled since 1981 when world prices began rising significantly.

Guatemala is the only Central American country that produces wheat in significant quantities. But because it is a soft type, the demand for hard wheat flours for pasta must be met with imports from the United States.

Trade policy and prospects

The Government is trying to increase incentives for exports in order to stimulate foreign and domestic investment. Also, it is modifying its agricultural policy to open the door for more private sector leadership in free trade zones throughout the national territory.

Guatemala is a member of the Central American Common Market (CACM) which means it has special marketing arrangements with the other member countries of Costa Rica, El Salvador, Honduras, and Nicaragua.

The CACM member countries share common import tariffs for most commodities and products. In addition to the established tariffs, Guatemala set up an additional 4-percent export tariff in 1987. This tariff periodically is reduced by a set percentage, so as to be exhausted by 1991.

The Guatemalan Government also has bilateral agreements with Argentina, Colombia, Mexico, and Venezuela, as well as with several European Community countries.

Since 1984, Guatemala has qualified for trade benefits from the United States under the Caribbean Basin Initiative (CBI). The CBI seeks to support economic activity and expand private sector opportunities in the Caribbean region through a one-way free trade area that allows duty-free access to the U.S. market through 1995 for most CBI country products. ●

through an agricultural marketing agency which establishes minimum producer prices and which purchases agricultural commodities for distribution to consumers at popular prices. In past years, though, the agency's limited capacity to purchase at harvesttime has had only minimal impact on prices.

Meanwhile, private industry controls the production of coffee, bananas, cardamom, rubber, livestock, sorghum, cotton, molasses, and sugar. The producers' prices for sugar are decided by mutual agreement between producers and processors and the Government then officially declares the price for the crop.

In the past 2 years, the Government has placed particular emphasis on working with small producers in order to expand their incomes and diversify their production. The primary vehicles of this policy have been subsidized fertilizer sales and

Honduras

Profile of agriculture

The agricultural sector represents the mainstream of Honduras' economic, social, and political structure. Agriculture is the single most important contributor to gross national product, employment, and export earnings.

Farming in Honduras is carried out mostly by small producers who are predominantly engaged in subsistence crops. Little land is irrigated and fertilizer use, although increasing in recent years, is still not widespread. Productivity is generally low and largely dependent on rainfall, which in past years has been relatively scarce.

Production highlights

Despite the wide range of problems that the agricultural sector faces, it has experienced some production growth since 1984. However, higher production of bananas and coffee was almost offset by hard times in the cotton, grain, poultry, sugar, and other

sectors. In fact, shortages of corn, milk, chicken meat, eggs, and sugar all occurred during 1988.

Although banana production has improved, it continues to suffer from several disadvantages. Honduran production costs are the highest in the industry due to high labor costs and burdensome export taxes. An overvalued currency makes Honduran bananas more expensive abroad in relation to those from Guatemala, Costa Rica, Colombia, and Ecuador. Moreover, disease infestations have reduced yields in some areas.

In 1988, banana production was 56.8 million 40-pound boxes and the outlook for 1989 looks slightly better. Although grown on a much smaller scale, plantains are becoming an increasingly important crop.

Honduras' coffee production in 1987/88 was down because of cyclical conditions and uneven rains before and during the crop year. For 1988/89, improved rainfall and cyclical production factors are expected to lift production levels to 1.7 million 60-kilogram bags.

Shrimp growing is one of Honduras' most promising new agri-industries, both as a foreign exchange earner and as a means of development. Cultivated shrimp earnings were an estimated \$19 million in 1988 and are projected to grow to \$100 million by 1992.

Over 50 percent of Honduras' area is made up of forests, but a high rate of depletion, high incidence of forest fires, and a large degree of mismanagement are reducing this area rapidly. Additionally, because land suitable for agriculture is scarce, it is estimated that 90,000 hectares of forest are destroyed annually to make way for agricultural activities. These factors, together with other industry problems, have reduced production and export of lumber sharply in recent years. Nonetheless, since 1987, production has slowly begun to increase.



Honduras at a Glance

Population (1988): 4.6 million

Urban population: 40%

Population growth rate: 3%

Per capita income (1988): \$948

Arable land area: 20,816 square kilometers

Major crops: Bananas, coffee, wood products, seafood, sugarcane, palm oil

Livestock sector: Cattle

Leading agricultural exports:

Bananas, coffee, wood, seafood, fruits, sugar, beef

Leading agricultural imports:

Processed foods, wheat, dairy products, vegetable oils

Agricultural imports as share of total imports (1987): 10%

U.S. share of total agricultural imports (1987): 39%

Percent of population in agriculture: 55%

Livestock production, which had been on the rise, has stagnated. Erratic rainfall during some years, and flooding during others, contributes to the lack of productivity as most cattle are grass fed. The poor nutritional level of animals, coupled with diseases, results in low birth and high mortality rates.

The Government has been striving to improve dairy production in order to reduce powdered milk imports. Over 3,000 head of U.S. cattle were imported in 1987 to improve the genetics of the national herd.

Agricultural Production

	1987/88	1988/89
	<i>thous. metric tons</i>	
Crop production ¹		
Bananas ²	49.8	45.2
Coffee ³	1.5	1.7
Corn	428	500
Cotton	2.8	2.8
Sugar	173	197

	1987	1988
	<i>millions</i>	
Livestock numbers ⁴		
Beef and dairy cattle	2.8	2.8

¹ Crop years are Jan.-Dec. for bananas; Oct.-Sept. for coffee; July-June for grains; Aug.-July for cotton; and Sept.-Aug. for sugar.

² Million 40-pound boxes.

³ Million 60-kilogram bags.

⁴ Estimates as of January each year.

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions ¹</i>	
Selected products		
Cattle and semen	1.9	2.0
Dairy products	1.0	12.2
Feed grains	3.5	3.7
Soybean meal	1.3	1.6
Tallow	3.8	3.8
Wheat	12.2	12.2
Total ²	55.0	90.0

¹ Values are shown in U.S. dollars at US\$1=2 lempiras. Includes commercial and concessional imports.

² Includes products not listed above.

Most oilseed products in Honduras are made from locally produced African palm oil. The short-term outlook for palm fruit is for slight increases in production as area under cultivation is expanded. Production of crude oil in 1988 is estimated at 52,000 tons. However, because of limited replanting until recent years, and the advanced age of some plantations, production of fruit is expected to decline in the early 1990's.

Production of sugar nearly tripled in less than a decade, going from 76,000 tons in 1975 to 220,000 tons in 1982. This increase was due to increased planted areas and improved yields. With low world market prices, sugar production in 1987/88 was 173,000 tons, 13 percent lower than the previous year. However, 1988/89 production is estimated to have improved to 197,000 tons.

Production of corn during the 1988/89 year is expected to reach 500,000 tons. While this is an improvement from the previous crop which was affected by a drought, it

will still fall short of Honduras' growing demand for animal feed.

For several years, cotton production has fallen due to low world market prices, drought, and the limited debt-servicing capability of producers. In 1987/88, 2,800 tons of lint cotton were produced on 4,000 hectares, the lowest levels in the last 16 years.

Farm and food policy

The Government sets support prices for cotton, corn, sorghum, rice, and beans. Retail price controls apply to a long list of commodities including eggs, butter, milk, wheat flour, chicken meat, coffee, sugar, and bread.

The Government has been attempting to diversify national production by encouraging small producers to grow fruits, winter vegetables, and other cash crops.

However, high interest rates and the fact that agricultural operations are viewed as high-risk ventures have prevented farmers from getting needed credit.

Imports and exports

In 1987, Honduras imported \$90 million worth of agricultural products and exported \$744 million. Major exports were bananas, coffee, wood, seafood, fruit, sugar and beef. The main imports included processed foods, wheat, and dairy products. Import demand also existed for tallow, soybeans, soybean meal, grains, and planting seeds.

Corn import needs for 1989 are estimated to be between 30,000 tons and 60,000 tons.

Honduras is planning to import at least 5,000 tons of milled rice in 1989—about the same amount as in 1988—because milled rice production has been smaller than expected.

During 1988, revenue from coffee exports totaled over \$200 million. For 1989, this figure could easily be surpassed if production and exports reach expected levels.

Wood exports in 1987 amounted to 96.7 million board feet, with 14 percent going to Latin America, 21 percent to Europe and Japan, and 65 percent to the Caribbean. An additional 33.3 million board feet of secondary products were also exported.

During the past several years, exports of beef dropped dramatically because export meatpacking plants were closed for extended periods because of low world market prices and lack of cattle.

The United States is Honduras' chief trading partner, supplying an estimated 39 percent of its imports and purchasing about 55 percent of its exports. Leading Honduran exports to the United States include fruits and vegetables, coffee, seafood, and beef.

Trade policy and prospects

The Central Bank controls imports and exports through licensing to conserve foreign exchange. Nonessential imports are discouraged. Imports are subject to duties ranging up to 150 percent, and also to a wide variety of taxes, surcharges, and fees.

The Government continues to attempt to stimulate exports. This should improve Honduras' negative trade balance and help generate much needed foreign exchange. Imports of many agricultural inputs are exempt from duties, and tax reductions are provided for export-oriented operations.

An Export Promotion Law allows the waiving of the 1-percent export tax for certain nontraditional commodities and the retention of up to 15 percent of value for exports of value-added products. The Ministry of Economy also has created an export office to simplify export procedures.

The Government issues certificates of foreign exchange to exporters for 20 percent of the total value of their exports. These certificates can be traded in commercial banks at a premium over the official exchange rate. ●

India

Profile of agriculture

Agriculture is the largest sector of India's economy. Over 70 percent of the country's 800 million people live in rural areas and are engaged in agriculture. However, production is dependent on monsoon rainfall, resulting in wide output fluctuations.

The agricultural sector was forecast to grow by about 15 percent this year compared with an estimated 2-3 percent drop in fiscal year 1988 due to drought.

India is the world's largest producer of black pepper, sugar, and tea and the largest exporter of black pepper and tea.

Agricultural Production

	1986/87	1987/88 ¹
	<i>mil. metric tons</i>	
Crop production ²		
Cotton ³	9.5	9.0
Food grains	143.4	138.4
Oilseeds	11.3	12.4
Sugarcane	182.5	196.0
Tea	.62	.67

Livestock numbers ⁴

	1987
	<i>millions</i>
Buffalo	74
Cattle	199
Goats	105
Sheep	55

¹ Projected

² Crop years are July-June.

³ Million bales, 170 kg.

⁴ Estimates as of April.

Production highlights

Aggregate farm production was valued at \$42.7 billion in 1988, down from \$43.9 billion in 1987 due to a severe drought. The vastly improved 1988 monsoon will boost India's 1988/89 grain production by over 20 percent to 163 million metric tons—an 11-million-ton increase over the record 1983/84 year and a 28-million-ton jump over 1988.

Total oilseed production is projected to reach a record 19 million tons. Refined sugar production should roughly equal the 1987/88 level of 9.1 million tons. Cotton production should reach a new high of over 10 million bales. India's 1988/89 (July-June) tobacco production was forecast up 24 percent to 45,000 tons.

In the livestock sector, total poultry meat production is projected to increase to 240,000 tons in 1989, up 7 percent from 1988, with broiler meat accounting for more than half of that. Cattle production, however, is hampered by inadequate feed and fodder resources due to limited land availability and competition from other crops.

Favorable weather helped 1988 tea production reach a new high of about 706,000 tons, over 4 percent more than the previous record in 1987 of 674,200 tons.

India harvested about 40 percent of total global pepper production in 1988 with exports of 50,000 tons, but the 1989 harvest will be down somewhat due to poor weather.

Walnut and almond production in 1989 also are suffering due to last year's drought.

Farm and food policy

The major goals of agricultural policy are self-sufficiency in food staples and adequate food supplies



India at a Glance

Population (1988): 816.8 million

Urban population: 204 million

Population growth rate: 2.01%

Per capita income (1987): \$250

Arable land area: 140.7 million hectares

Major crops: Black pepper, coarse grains, coffee, cotton, jute and mesta, peanuts, potatoes, rice, sugarcane, tea, tobacco, wheat

Livestock sector: Buffalo, cattle, poultry, sheep

Leading agricultural exports: Black pepper, cashews, coffee, cotton yarn, fruits and vegetables, leather and leather manufactures, marine products, oilcakes, tea

Leading agricultural imports: Edible oils, pulses, sugar, wheat

Agricultural imports as share of total imports (1987/88): 6.8%

U.S. share of total agricultural imports (1987/88): 8.5%

Percent of population in agriculture: 70%

at affordable prices for low-income consumers.

Expanding cereal production continues to be one of India's major objectives. The focus in recent years has been on increasing irrigation potential, improving irrigation management, popularizing the use of

Value of Agricultural Imports, April-March 1987/88

Selected products	Imports from	
	United States	All suppliers
	\$ millions ¹	
Edible oil	30	708
Pulses	7	196
Sugar	N/A	134
Total ²	110	1,666

¹ Values are shown in U.S. dollars at US\$1=13.00 rupees. Includes commercial and concessional imports.

² Includes products not listed above.

inputs such as high-yielding variety seeds, fertilizers, and agricultural chemicals, and improving agronomic practices.

The Government annually announces support and procurement prices for all major crops, including wheat and rice. Farm subsidies are confined mostly to supplying fertilizer to farmers at subsidized rates, providing electricity for irrigation, and reducing interest rates on farm credit.

Imports and exports

India's leading agricultural imports are edible oils, pulses, and sugar. In addition, despite increased food grain production, India has had to import wheat and rice due to low grain reserves. Food grain stocks were only 9.4 million tons as of January 1989 (4.8 million of wheat and 4.6 million of rice), even after importing 2 million tons of wheat

and 650,000 tons of rice in 1988. Stocks were 5.5 million tons below 1988 levels and 15 million tons below 1987.

India has a serious and growing problem with deforestation attributed to increasing demand for cropland, fuel, and wood products so it will become increasingly dependent on imports to meet its wood needs. India's duty structure on forest products has been a drawback to expanding U.S. wood product sales there.

In 1988, India imported vegetable oil, nonfat dry milk, dry peas, and almonds from the United States.

Leading Indian agricultural exports are black pepper, cashews, cotton yarn, leather, and tea.

India exported 50,000 tons of black pepper in 1988 and had close to 40 percent of the world pepper market. Other competitors were Brazil, Indonesia, and Malaysia.

Cashew nut kernel exports during 1987/88 (April-March) totaled around 37,000 tons, down 12 percent from the previous year due to reduced production and higher prices. The United States continued to be the largest market for Indian cashew nuts, importing 11,477 tons last year, followed by the Netherlands and Soviet Union. India also imports raw cashew nuts to use for its excess processing capacity and to meet export demand for processed nuts.

Tea exports increased in 1988 to around 222,000 tons. The Soviet Union maintained its position as the largest buyer of Indian tea with imports of around 95,000 tons.

In addition to India's traditional leading export commodities, soy-meal exports during marketing year 1988/89 are expected to post a

dramatic increase due to higher production and better export demand.

In recent years, tobacco exports have been declining due to anti-smoking campaigns in importing countries and a reduction in purchases by leading importers such as the Soviet Union and England. India's total 1987/88 (April-March) unmanufactured tobacco exports were 48,000 tons, 28 percent lower than 1986/87.

Indian agricultural exports to the United States consist mainly of cashews, spices, coffee, herbs, and crude drugs, such as opium, psyllium seed, and ginseng.

Trade policy and prospects

Foreign trade of virtually all farm commodities is controlled either by Government monopolies, by a combination of quotas, duties, and minimum export prices, or by an outright ban on trade. The monopolies, such as the food corporation of India (cereals) and the state trading corporation of India (edible oils and sugar), implement trading decisions made by interministerial committees. While many exports are handled by private traders, most are regulated to assure adequacy of domestic supply. Pulses are currently the only major farm commodity that can be imported by private traders, subject to a 25-percent duty.

Imports are used only to meet domestic shortfalls and halt unacceptable swings in consumer prices. Farm exports are a secondary goal and adequacy of domestic supply typically takes precedence over export commitments. ●

Indonesia

Profile of agriculture

Indonesia is the fifth largest country in the world with a population of 176 million people. About three-quarters of the Indonesian population is rural.

Agriculture accounts for nearly 25 percent of the gross domestic product in Indonesia and employs about half of the country's labor force. Farms average about 1 acre in size and are worked mostly by hand.

Rice is the most important food crop in Indonesia, with per capita consumption at about 140 kilograms per year. Indonesia also produces corn, palm and coconut oil, lumber, copra, coffee, soybeans, cassava (a source of tapioca), dairy products, swine, poultry, spices, and small quantities of other agricultural goods.

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop production		
Cassava	14.35	15.28
Copra	1.25	1.27
Palm oil	1.37	1.50
Peanuts	0.78	0.79
Soybeans	0.95	1.10
Soybean meal	0.08	0.19
Sugar	2.12	1.88
Tea	0.12	0.14

	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Dairy cattle	0.23	0.25
Hogs	6.21	6.53
Poultry	230.27	242.80
Sheep	5.21	5.42

¹ Based on latest livestock survey.

Production highlights

Indonesia's agricultural sector posted a good year in 1988, as favorable weather helped the country recover from drought in 1987. The economy, including agriculture, grew by an estimated 4 percent in 1988.

The good weather provided for a record rice crop and improved corn and soybean crops. This good weather trend has continued into 1989 and a further rise in crop production is expected.

After rice production increased due to greater inputs in the early 1980's, the rate of increase in production has slowed following the 1987 drought and a leveling off of input use.

Over 90 percent of the rice produced in Indonesia is irrigated by means of a terracing system developed over centuries and supplemented by recently developed canals. About 60 percent of the country's rice is produced on Java.

Corn production in 1989 is expected to be around 5 million metric tons. Production is on a gradual uptrend due to the adoption of hybrid varieties of corn.

In 1988, plywood production facilities in Indonesia increased from 108 to 120. Production capacity went from 8.5 million cubic centimeters in 1987 to 8.9 million cubic centimeters in 1988. Plywood exports reached 6.9 million cubic centimeters in 1988, worth \$2.2 billion. The Indonesian Government will not allow more plywood mills to be opened.

The livestock sector continues to grow slowly, and several new feedlots have been opened.

Farm and food policy

In April 1989, Indonesia embarked on another in a series of 5-year development plans. With this



Indonesia at a Glance

Population (1988): 176 million

Per capita income (1988): \$414

Arable land area: 287,895 square kilometers

Major crops: Rice, cassava, coffee, palm oil

Livestock sector: Growing dairy and poultry farms; expanding swine industry

Leading agricultural exports:

Rubber, vegetable oil, coffee, wood products, tea

Leading agricultural imports:

Wheat, cotton, soybeans

U.S. share of total agricultural imports: 19.5%

Percent of population in agriculture: 55%

plan, the burdens of economic development are expected to shift from the Government to the private sector. The Government's efforts to open the economy will enable private business to meet this responsibility.

The plan priorities are increasing production of food crops, estate crops, and agricultural commodities for export. Other goals are greater growth of agricultural processing industries, the livestock and poultry sectors, forestry, and fisheries.

The policy of the Government has been to promote consumption of domestically produced products, but as the rate of population growth

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Cotton	98.1	302.1
Oilseeds	53.9	162.3
Vegetable oils	0.7	165.3
Wheat	25.4	225.4
Total²	244.0	1,374.7

¹ Values are shown in U.S. dollars at US\$1=1,680 rupiahs. Includes commercial and concessional imports

² Includes products not listed above.

surpasses the expansion in domestic rice production, wheat may become increasingly important as a rice substitute.

Despite the positive economic policy developments of the past several years, Indonesia faces several major economic challenges. Indonesia is an oil-producing nation. Low international prices for oil have resulted in cuts in recent years in funding for agricultural development, fertilizer subsidies, and pesticide subsidies.

However, largely thanks to external investment, the development budget for agriculture was increased to almost \$1 billion for fiscal year 1989/90 (April-March). This was up sharply from under \$600 million in fiscal year 1988/89.

Imports and exports

The primary agricultural imports are wheat, vegetable oils, soybeans, and cotton.

Wheat imports rose 6 percent in marketing year 1988/89 because of increased per capita consumption of wheat products. Wheat products are slowly gaining acceptance as substitutes for rice, particularly in the form of noodles in urban areas.

Major wheat suppliers to Indonesia are Australia, Canada, Saudi Arabia, and Argentina. The U.S. share of the Indonesian wheat market has fallen from 50 percent in the early 1980's to 10 percent in 1989.

The United States captured larger shares of the cotton and soybean markets in 1988 and is expected to remain the largest cotton supplier in 1989.

Indonesia imported \$244 million worth of agricultural products from the United States in 1988, up sharply from 1987's value.

Indonesia's agricultural exports continued to expand in 1988, led by forest products (particularly plywood), rubber, coffee, seafood (mostly shrimp), and palm and coconut products.

Indonesian exports to the United States surpassed \$880 million in 1988. Rubber, coffee, wood products, and spices were the main products the United States purchased from Indonesia.

The palm oil industry has seen a rise in exports of 25 percent in 2 years. In addition to the increased exports of palm oil, coconut oil exports have risen.

Trade policy and prospects

Major steps to improve international trade have included: implementing regulations that make it easier for exporters to receive rebates on duties; allowing foreign businesses to invest in Indonesian industries; simplifying trade licensing procedures; and reducing the number of import monopolies.

Late in 1988, the Government removed additional import restrictions, expanded and simplified domestic marketing arrangements, and revised the country's shipping regulations.

As part of the economic liberalization program, the Government passed a measure that allows unrestricted import of certain high-value food products, such as orange juice and nuts. Further reductions in import restrictions on other high-value products are expected. An earlier Government program removed most restrictions on feed grain imports. ●

Ireland

Profile of agriculture

Until the mid-1950s, the Irish economy was largely agrarian. Over the past two decades the Government has promoted rapid industrialization, using various inducements to attract a significant amount of industrial investment from overseas sources, especially the United States.

Ireland is 85 percent self-sufficient in its food supply. However, an estimated 2 percent of the farm population is leaving farming each year. As the result of consolidation, the average farm size in Ireland is increasing. This trend is expected to accelerate over the next few years.

Agriculture contributed 10 percent to the gross national product in 1988 and employed 15 percent of the workforce. In addition, agriculture indirectly provided opportunities for additional tax revenue and employment through processing of primary products.

Major agricultural products are meat and dairy products, potatoes,

turnips, barley, sugar beets, hay, silage, and wheat.

Production highlights

Irish farmers had a relatively good year in 1988 due to a combination of favorable weather and better prices—particularly for grains, sheep, and cattle.

After several slack years, spring barley yields regained normal levels of about 5 tons per hectare in 1988; winter wheat regained normal levels of about 7 tons per hectare. However, growth in agricultural output remains restricted by European Community (EC) programs to cut surpluses and budget expenditures.

A notable exception is the number of sheep, which continues to grow at a rapid rate. Total sheep numbers for 1988 reached nearly 5 million—a 16-percent increase over 1987.

In recent years, Irish beef production has been restricted by falling dairy cow numbers, since three-fourths of the beef calves traditionally are surplus dairy stock.

However, efforts by the Government and farm organizations to increase the beef herd began paying off in 1988. The turnaround in beef breeding stock meant a sharp expansion in cattle numbers in 1989, with increased beef output by 1991.

Hog producers continue to suffer from the relatively high cost of feedstuffs in Ireland which has slowed the rate of pig production.

Poultry and egg production and consumption have grown rapidly over the past few years. However, consumption, particularly of eggs, suffered a sharp setback during the winter of 1988 because of the outbreak of salmonella in Ireland and the United Kingdom. The effects of the salmonella scare are expected to slow the strong growth trend in consumer demand and, consequently, in poultry production.



Ireland at a Glance

Population (1988): 3.5 million

Urban population: 2.0 million

Population growth rate: 0%

Per capita income (1988): \$6,117

Arable land area: 9,839 square kilometers

Major crops: Turnips, barley, potatoes, sugar beets, wheat

Livestock sector: Cattle, sheep, hogs, poultry

Leading agricultural exports: Meat and dairy products, live animals

Leading agricultural imports: Live horses, wheat, corn gluten, cereals, meat, fresh fruits and vegetables, soybean meal and other protein feed products, vegetable oils, forest products

Agricultural imports as share of total imports: 14%

U.S. share of total agricultural imports: 12%

Percent of population in agriculture: 15%

Agricultural Production

1986/87 1987/88
mil. metric tons

Crop production¹

Barley	1.34	1.43
Sugar beets	1.34	1.62
Potatoes	.62	.70
Turnips	.51	.57
Wheat	.40	.37

1987 1988
millions

Livestock numbers

Beef cattle	3.45	3.80
Dairy cows	1.65	1.60
Hogs	.96	.96
Poultry	8.64	8.83
Sheep	4.30	4.99

¹ Crop years are July-June.

Farm and food policy

Membership in the European Community in 1973 was one of Ireland's most significant postwar developments. However, two factors are weakening Ireland's support for the EC's Common Agricultural Policy (CAP): consumer concern about high EC supports for surpluses in agriculture, and the steady decline in the agricultural vote.

EC policies to cut budgetary expenditures, and pressures from

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Corn gluten	47	77
Dairy products	0	64
Forest products	11	139
Fruits and vegetables, fresh and processed	6	287
Horses, live	37	89
Meat	0	124
Vegetable oils, fixed	0	43
Wheat	3	68
Total²	\$267	\$2,151

¹ Values are shown in US\$1=0.66 Irish pound.

² Includes products not listed above.

other trading blocs to reduce support prices for most commodities of interest to Ireland likely will lead to changes in CAP support of farm prices.

Dairy and sugar output remain capped by EC quotas and Ireland may pay some 9 million Irish pounds in levies for overproduction during the 1988/89 quota year. Further decreases in grain support prices, together with the EC's set-aside program, will discourage any expansion in grain production unless market prices remain strong.

Imports and exports

Two-thirds of Ireland's imports come from other EC countries, principally the United Kingdom. The United States remains the main trading partner outside the EC.

Irish agricultural imports totaled \$2.2 billion in 1988. Import leaders included race horses, meat, fresh

fruits and vegetables, grains, corn gluten feed, soybean meal, other animal feeds, and forest products.

A further rise in imports, resulting from increased consumer spending and industrial investment, is expected.

The United States is the only country that has a positive agricultural trade balance with Ireland. U.S. agricultural exports to Ireland hit a record high of \$267.4 million in 1988, with increases in shipments of hardwoods, plywoods, wine, race horses, milling wheat, cotton, and peptone/hide powder.

The expected growth in Irish consumer incomes and spending, and a recovery in the construction industry, could result in further increases in demand for U.S. wines, health foods, innovative and quality foods, and hardwoods and plywood.

Although an unusually mild winter reduced Ireland's feed demand in the early part of 1989, animal feedstuffs such as corn gluten, fatty maize, citrus pulp, and soybean meal continue to be important U.S. exports.

Three-fourths of Ireland's exports go to other EC countries. The United Kingdom remains the leading export destination.

Ireland's agricultural exports increased significantly in 1988 due mostly to a drawdown in intervention stocks. Agriculture continued to account for a quarter of Irish exports in 1988. The strong export performance was a major contributor to economic growth.

Irish agricultural export growth will continue in 1989 but not as strongly as in 1988. The small, open Irish economy is sensitive to external economic developments, and export growth will depend on the rate of economic activity of Ireland's main trading partners.

Lamb exports will be one of the few commodities to show significant export growth.

Stocks of nearly all dairy products are down to minimum levels. Butter exports will be down substantially; cheese shipments also will fall although not as dramatically as butter. Casein will remain a significant export to the United States.

Exports of beef will likely be down at least 15,000 tons and live cattle exports will be down some 30,000 to 40,000 head. Pork exports will remain static, in line with production.

Trade policy and prospects

There is a continued trend towards relaxing Ireland's strict animal and plant health import regulations, as evidenced by the access gained for U.S. poultry and cattle products. This is partly due to a recognition by Irish authorities that, with 1992 not far away, the lowering of these barriers is inevitable.

After years of negotiations, U.S. bovine semen and embryos and cooked chicken products gained access to Ireland in 1988.

The Irish market should continue to be attractive to U.S. exporters, provided that the dollar does not strengthen significantly. Ireland will continue to be a large importer of U.S. nongrain feed ingredients such as corn gluten feed and oilseed meals.

There is also importer interest in U.S. convenience foods, health foods, snack foods, fruits, nuts, and beverages. The principal constraints to the marketing of U.S. high-value products are EC tariffs and logistical problems.

Irish port facilities and size of market mean that cargoes are normally transshipped via other European ports. ●

Italy

Profile of agriculture

Italy's agriculture is typical of the division between the agricultures of the northern and southern countries of the European Community (EC), of which Italy is a member. The northern part of Italy produces primarily grains, sugar beets, soybeans, meat, and dairy products, while the southern section specializes in production of fruits, vegetables, olive oil, wine, and durum wheat.

Even though much of its mountainous terrain is unsuitable for farming, Italy has a large workforce (2.1 million) employed in agriculture. Most farms are small, with the average farm only 7 hectares.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Apples	2.3	2.6
Corn	5.8	6.4
Olives	3.5	2.7
Oranges	1.4	2.0
Soybeans	1.6	1.3
Sugar beets	15.5	13.3
Tomatoes	5.3	5.0
Wheat	9.4	8.0
Wine grapes	9.9	9.6

	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Cattle		
Beef cattle	8.9	8.8
Dairy cows	3.0	2.0
Hogs	9.2	9.3
Poultry (1,000 MT)	982	946
Sheep	11.4	11.4

¹ Estimates as of January each year.

Production highlights

According to most economic indicators, 1988 was not a good year for Italian agriculture. Production was down, prices failed to keep up with inflation, agricultural employment was down, the increase in demand for agricultural inputs was below the 1987 level, and production costs increased.

The value of Italian agricultural production fell 2.5 percent in 1988 to \$38.6 billion. The largest declines were for olives (20 percent), soft wheat (17 percent), wine (15 percent), soybeans (13 percent), sugar beets, and durum wheat (each down 6 percent). The largest increases were for oranges (22 percent), mandarins (18 percent), and lemons (10 percent).

Total cereal production in 1988 was down 2 percent in volume to 17.5 million tons due in part to poor weather. One notable development in 1988 was an increase in corn production and area as farmers—disappointed with such competing crops as soybeans and sugar beets—switched to corn.

As a result of farmer disillusionment with soybeans, production fell by more than 300,000 tons to 1.3 million tons and area was down by almost 100,000 hectares. This negative attitude toward soybeans was fueled by the difficulties small farmers had in 1987 with harvesting and selling their crop to crushers.

The volume of olive oil production was down by 32 percent as 1988 was an off-year in the production cycle. Olive trees hit by a freeze in 1985 showed good recovery this year.

Total livestock production did not change noticeably in 1988. Beef production declined. In the dairy sector, the trend toward greater concentration continued with dairies becoming larger and more modernized. Milk output was up about 0.5 percent in volume. Pork production



Italy at a Glance

Population (1988): 57.5 million

Urban population: 39 million

Population growth rate: 0.18%

Per capita income (1988): \$12,955

Arable land area: 94,000 square kilometers

Major crops: Fruits, wine grapes, vegetables, cereals, potatoes, olives

Livestock sector: Cattle, hogs, sheep, poultry

Leading agricultural exports: Wine, fresh fruit, tomato products, fresh vegetables, olive oil

Leading agricultural imports: Meat, forest products, live cattle, fish, oilseeds and meals, cotton

Agricultural imports as share of total imports: 17.1%

U.S. share of total agricultural imports: 4.3%

Percent of work force in agriculture: 10.5%

reached a record high of 965,000 tons. Poultry production, which has been growing steadily since 1970, also increased in 1988.

Fruit and vegetable production fell by 5 percent in 1988 to 26.3 million tons. Vegetable production showed a slight decline, continuing a trend that began in the early 1980's. Tomato production was down by 6 percent in 1988 to 5.0 million tons, due to weather and phytosanitary problems.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Cotton	146.1	543.8
Forest products	181.8	2,119.8
Live cattle	0	3.6
Meat	10.7	3,151.3
Oilseed cake	154.1	395.5
Seeds		
for planting	13.4	109.8
Wheat	55.5	1,178.9
Total²	1,009.8	23,592.2

¹ Values are shown in U.S. dollars at US\$1=1,301.6 lire. Includes commercial and concessional imports.

² Includes products not listed above.

Citrus production was up 26 percent in 1988 to 3.3 million tons. Deciduous fruit production was up 7 percent, led by a 12-percent gain in apple output.

Italy's wine production fell 14 percent in 1988 to 65.5 million hectoliters, only the second time in 10 years that production has fallen below 70 million hectoliters.

Farm and food policy

Developments in Italian agricultural policy have been influenced largely by the Common Agricultural Policy (CAP) of the EC, and by deeply rooted regional imbalances and structural inadequacies.

The immediate concern of Italian agricultural policy is that of farm income, particularly in the southern part of the country. Long-term policy goals are continued development and modernization of

agriculture to boost output and reduce the agricultural trade balance. In 1988, the agricultural trade deficit of \$13.7 billion surpassed that of energy for the first time, and became the leading trade-deficit sector.

Italy's trade deficit affects its orientation to the CAP. Italian imports are mainly of northern products that receive high CAP price supports, while Italian exports are primarily products such as fruit, vegetables, and wine, which receive relatively weaker CAP support.

Italy's policy goal is to obtain increased CAP market supports for its products and EC funding to improve farm structures in the southern region. Italy also supports high prices for northern-type products because they are considered necessary to increase Italian production and self-sufficiency.

Although prices for most commodities will be frozen in the proposed 1989/90 EC price package, prices will likely be cut for three products that are important to Italy—durum wheat, sugar, and citrus.

Imports and exports

Italian agricultural imports in 1988 reached \$23.6 billion, up 8 percent from a year earlier. The largest increases in imports were recorded for unmilled rice (78 percent), corn (27 percent), and fresh fruit (10 percent).

The largest declines in imports were for semi-milled rice (61 percent), eggs (51 percent), beef (34 percent), oilseeds (33 percent), other coarse grains (27 percent), and olive oil (23 percent).

U.S. agricultural imports in 1988 totaled \$1.01 billion, compared with \$1.09 billion in 1987. Sharply rising imports of U.S. cotton, forest products, and consumer-oriented products were offset by sharp declines in U.S. shipments of soybeans and oilseed meals.

The notable trend continued toward increased importance of U.S. consumer-oriented and intermediate products in the Italian market. Several of these products had substantially larger sales in 1988, including dried fruit and nuts (up 13 percent), forest products (up 20 percent), hides and skins (up 39 percent), and corn oil (up 7 percent). However, sales of oilseed meals and seeds were down by 24 and 16 percent, respectively.

Among bulk U.S. imports, cotton registered a major increase of 83 percent, while the largest decreases were for oilseeds (71 percent) and tobacco (11 percent).

Italy's total agricultural exports to all destinations in 1988 were up nearly 11 percent to \$9.0 billion. Major exports were fresh fruit (\$1.2 billion), wine (\$934 million), fresh vegetables (\$553 million), and tomato products (\$516 million). Exports to the United States were about \$600 million, including tomato products, olive oil, and wine.

Trade policy and prospects

Italy applies EC tariffs, levies, and other regulations such as phytosanitary, labeling, and health norms to imports from third countries. Italian regulations on some high-value products are more rigid than those required under EC directives. For example, Italy prohibits imports of high-quality beef, oranges, and apples from the United States and many other origins.

Health and safety issues will continue to figure in U.S.-Italian agricultural trade, foreshadowing the possibility of further controversial issues ahead as 1992 approaches. The level of the U.S. dollar will have a bearing on U.S. exports to Italy, particularly of consumer-oriented products, cotton, and wood products. Prospects for all three of these items continue to be bright if U.S. prices remain competitive. ●

Japan

Profile of agriculture

Japan is one of the most densely populated nations in the world with about half the population of the United States concentrated along a rugged land mass about the size of Montana. However, only 14 percent of its 145,000 square miles is under cultivation.

Japan's agriculture is declining in its importance to the country's economy, despite Government policies designed to keep agricultural resources from shifting into more efficient sectors. Japanese agriculture contributes only 3 percent to national income.

Japan's agriculture is centered on rice, livestock products, and fruits and vegetables.

Rice accounts for one-third of gross agricultural income and is cultivated on about 40 percent of the agricultural land.

Livestock production expanded rapidly in recent decades in response to the demand for a more diversified diet, and now accounts for about a fourth of gross farm income. Rapidly rising fish prices

over the past several decades have accelerated the shift from fish to eggs, dairy products, and meats.

Production highlights

Bad weather cut Japan's 1988 rice production to 9.0 million metric tons, the worst harvest since 1980. Assuming a return to more normal yields in 1989, rice production should recover to 9.8 million tons, which would be above production levels of the past two seasons.

Due to high support prices, Japanese rice production continues to exceed a declining consumption, which has resulted in high stock levels.

Japanese beef production is slated to increase in 1989, despite greater competition as a result of market liberalization. The Japanese Government is moving rapidly to support livestock producers during the transition to an open market which, along with structural adjustment in the sector, could result in little or no decline in production.

Farm and food policy

The Japanese Government treats agriculture as a special industry with a key role in the country's cultural and economic life. Government goals for agriculture throughout the 1980's have included: securing a stable food supply, maintaining the Japanese diet (characterized by high rice and fish consumption, low meat and fat intake, and relatively low total caloric consumption), realizing higher farm productivity, and protecting natural resources and the integrity of rural villages.

Measures taken to expand the country's food supply include administering high price supports through the use of strict border measures (which protect Japanese farmers from outside competition) and improving farm productivity through various Government land and rural development programs.

However, high administered rice prices, while they have encouraged



Japan at a Glance

Population (1988): 122.8 million

Urban population: 87.5 million

Population growth rate (1988): 0.4%

Per capita gross domestic product (1988): \$23,000

Arable land area: 5.3 million hectares (1988)

Major crops: Rice, vegetables, fruit, sugar

Livestock sector: Fish, beef

Leading agricultural exports:

Dried mushrooms, confectionery products, wheat flour, swine, hides and skins

Leading agricultural imports: Feed grains, logs, soybeans, wheat, sugar, cotton, tobacco, cattle hides, tallow, red meats, citrus, poultry

Agricultural imports as share of total imports: 18.7%

U.S. share of total agricultural imports: 34%

Percent of population in agriculture: 16%

production, have helped to discourage consumption and to cause surpluses. They have also led to three rice land diversion programs and two surplus disposal programs in the past 15 years.

Imports and exports

Japan is the world's largest net importer of farm products and the largest single country agricultural market for the United States overseas. Japan's agricultural exports are

Agricultural Production

1987/88 1988/89
mil. metric tons

Crop production

Mikan oranges ¹	2.9	2.4
Rice ²	9.7	9.0
Wheat ³	0.9	1.0

thous. head

Livestock numbers ⁴

Beef cattle	2,650	2,651
Dairy cattle	2,017	2,031
Swine	11,725	11,866
Broilers	154,869	153,852

¹ October-September.

² Milled production, November-October.

³ July-June.

⁴ Estimates as of February 1 each year.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions ¹</i>	
Selected products		
Alcoholic beverages	53	304
Coffee	19	889
Corn (for feed)	1,351	1,490
Cotton	534	1,288
Fish and shellfish	2,197	10,934
Fruits and vegetables	1,042	3,324
Meat	1,573	4,313
Wheat	564	1,034
Wool	²	1,177
Logs, lumber, panel products	2,462	7,747
Wood chips	401	1,069
Total ³	14,202	46,791

¹ Values are shown in U.S. dollars at US\$1=128.15 yen.

² Less than \$500,000.

³ Includes products not listed above.

relatively small, consisting primarily of dried mushrooms, confectionery products, and wheat flour.

Japanese wheat imports in 1988 rose 5 percent to 5.7 million tons, and the U.S. market share, usually maintained at a fairly constant level by the Government, remained at about 57 percent. However, increasing pressure from imports of processed wheat products will likely lead to reduced wheat imports in 1989.

Imports of U.S. corn in 1988 totaled 1.4 million tons, or 91 percent of the Japanese import total. Competition in the Japanese corn import market is stiffening in 1989 with the prospects for a bumper South African crop.

Because of the continuing substitution by rapeseed and large

imports of Chinese soybean meal, Japanese soybean imports in 1988 declined 2 percent to 4.7 million tons. U.S. soybeans still supply the bulk of the market, but are losing market share to Brazilian imports because of price and quality factors. Considerable market opportunities exist for the United States in the area of food-use soybeans, which enjoy a steady growth in consumption.

Beef imports into Japan will be subject to quota until April 1, 1991, when all controls will be lifted under the terms of the 1988 U.S.-Japan beef and citrus agreement. Within the current quota, U.S. beef exports to Japan grew to nearly 42 percent of total imports. Overall beef imports from the United States, including nonquota cuts, amounted to 54 percent of total Japanese imports.

In 1988, pork imports from Taiwan, the leading supplier to Japan, fell nearly a tenth due to a delay in correcting a sulfamethazine residue problem. This allowed the United States to increase its market share to 12 percent.

The United States regained the top spot in Japan's poultry import market by capturing 45 percent of the 1988 import total. Since 1987, imports of "other chicken" have surpassed the "bone-in leg" category, indicating growing demand for value-added products.

Japanese imports of fresh citrus fruit were up 3 percent in 1988, with the United States the leading supplier of such items as oranges, lemons, and grapefruit.

With hard times in Japan's sawmill industry, and housing starts tapering off, demand for logs in 1988 was down from the year before. The U.S. share of log imports was about one-third in 1988, but imports in total were down 8 percent from 1987. Lumber imports, on the other hand, were up nearly 15 percent to 8.5 million cubic meters. Although still a small portion of total wood frame construction in Japan, 2 by 4 housing is beginning

to show promise as builders learn the efficiencies to be gained from such construction.

Trade policy and prospects

Japan's agricultural trade policy emphasizes minimizing imports where possible and, where not possible, encouraging imports of raw materials and discouraging purchases of value-added goods. As a consequence, only a relatively small percentage of U.S. farm exports to Japan are value-added. By far the most are bulk commodities such as feed grains, soybeans, wheat, cotton, tobacco, and cattle hides.

Japan is under a great deal of pressure from its international trading partners to open its market to a wider variety of agricultural products—and the Government has made some concessions along these lines.

For example, the Japanese Government has committed itself to address the politically charged issue of liberalizing access to its rice market in the context of the Uruguay Round of Multilateral Trade Negotiations.

The Japanese government also agreed in 1988 to improve market access for beef, citrus, and numerous high-value processed agricultural products. Japanese food processors are flocking to the United States to build juicing, packing, and canning facilities to supply Japan as market liberalization proceeds.

In response to these recent trade liberalization measures, the Japanese Government is funding efforts to improve the competitiveness of its domestic beef and citrus sectors. The Government is studying the export market as a possible outlet for beef and high-quality fruits. In addition, the Government is redoubling its commitment to biotechnology research in order to develop higher yielding, unique products which can compete more effectively in coming years. ●

Jordan

Profile of agriculture

Agriculture is one of the main pillars of the Jordanian economy and a major source of income for 20 percent of Jordan's population.

Jordan is a country of rocky deserts, mountains, and rolling plains. The land area totals about 9.2 million hectares, of which about 800,000 get enough rain to have agricultural potential. The actual area used for crops, vegetables, and trees in 1989 was 300,000 hectares. Rain-fed lands constitute the largest proportion (92 percent) of total arable land. The remaining 8 percent is partially or fully irrigated and lies mostly in the Jordan Valley.

Land holdings are small and fragmented. In the Ghor Valley the average size of farms is about 3.5 hectares each, while in the rain-fed highlands the size of each farm is about 25 hectares.

Wheat is Jordan's largest crop, in terms of land cultivated, and is the

most important grain to the economy. Wheat production was 100,000 tons in 1988.

The country also produces many different vegetables and fruits on a year-round basis using such modern technologies as drip irrigation systems and plastic greenhouses. In fact, Jordan is self-sufficient in most common vegetables and fruits. The main items produced include tomatoes, cucumbers, eggplant, squash, beans, cauliflower, cabbage, peppers, bananas, citrus, and grapes.

Livestock—chiefly sheep and goats—account for 40 percent of gross agricultural value in Jordan. However, the country is able to meet only about a fifth of its red meat needs through local production.

The poultry industry—which is privately controlled and highly modernized—supplies more than nine-tenths of local market needs. Jordan has 1,469 poultry farms with approximately 55 million birds.



Jordan at a Glance

Population (1988): 3.7 million

Urban population: 70%

Population growth rate: 3.8%

Per capita income (1988): \$2,070

Arable land area: 800,000 hectares

Major crops: Vegetables, fruits, olive oil, wheat

Livestock sector: Sheep, goats, poultry, eggs

Leading agricultural exports: Horticultural crops, hatching and table eggs

Leading agricultural imports: Wheat, barley, corn, rice, oilseed products, live animals, red meats, dairy products

Agricultural imports as share of total imports: 22%

U.S. share of total agricultural imports: 13%

Percent of population in agriculture: 80%

Agricultural Production

	1987	1988
	<i>metric tons</i>	
Crop production		
Olives	24,089	61,206
Tobacco	4,200	2,800
Vegetables	852,126	858,000
Wheat	108,000	100,000

	1986	1987
	<i>metric tons</i>	
Livestock production		
Milk	51,720	61,535
Poultry	64,000	63,000
Red meat	6,559	7,964

	<i>head</i>	
Livestock numbers		
Cows (thous.)	31.1	29.1
Goats (thous.)	439.2	460.1
Poultry (mil.)	50	55
Sheep (thous.)	930.0	1,219.0

Production highlights

Prospects for agricultural output in 1989 are generally promising as a result of abundant rainfall during November 1988-late February 1989. Wheat, barley, lentil, and chickpea output are likely to at least equal 1988 levels. However, prospects for horticultural products are down from 1988 because frost damaged 20 to 50 percent of the crops in several important producing areas.

In 1988, generally good rainfall distributed throughout the country boosted crop output. Production of cereals and pulses rose by 23 percent over 1987. Production of olives, the principal oilseed crop, topped 61,000 tons in 1988—more than two and a half times the level of the previous year. Tobacco production dropped from 4,200 tons in 1987 to 2,800 tons in 1988.

On the livestock side, sheep and goats comprise slightly over 90 percent of Jordan's livestock num-

bers. Production of sheep meat, at 5,028 tons in 1987 (the latest year for which livestock data are available), was up a third from the year before, but was still below the peak of the past decade which was 6,356 tons reached in 1985. Output of goat meat also registered a gain in 1987 of about 5 percent from 1986, but remained below output in all other years in the 1980's.

Milk production in 1987 rose nearly a fifth from the year before, hitting its highest level in a decade.

Production of poultry meat in 1987 totaled 63,000 tons, down

slightly from the 64,000 tons produced in 1986. Domestic production covered 92 percent of Jordan's needs.

Farm and food policy

Although it has increased its agricultural production significantly in recent years, Jordan remains a food deficit country and will have to rely on food imports for many years to come. It imports substantial quantities of grains—including wheat, barley, corn, and rice, as well as oilseed products, live animals, red meats, and dairy products.

The Government encourages the production of such crops as grains, potatoes, and onions through the provision of price supports to producers.

The Government also is trying to boost production of lamb, mutton, and goat—which are the principal red meats—through the provision of improved breeding stock and the establishment of fattening and service stations where producers can buy balanced feed mixes and veterinary products, use the dip facilities, and hire such equipment as sheep handling systems and weighing machines.

Other Government projects of importance to agriculture include a major expansion in wheat storage and handling capacity; experiments with weather modification in order to generate more rain; and the construction of the Al-Wendah Dam, a joint project with Syria which will increase irrigation water supplies for both countries.

Imports and exports

Fruits and vegetables rank among the country's chief exports, along with phosphates. Jordan has agreements to supply a number of West European countries (the Netherlands, Britain, France, Belgium, Denmark, and Switzerland) with produce. In addition, Jordan barter with its neighbors for the few

horticultural crops (generally onions, garlic, and apples) it doesn't grow enough of locally. In 1987, fruit and vegetable exports totaled 251,208 tons, while imports were 32,622 tons.

Jordan also is able to supply some of its neighbors with table and hatching eggs. In 1988, the country sold 14 million table eggs and 40 million hatching eggs to Iraq, 36 million table eggs to Yemen, and 10 million hatching eggs to Saudi Arabia. Jordan also has supply agreements for 30 million table eggs each with Qatar and the United Arab Emirates.

On the import side, the United States is usually one of the top suppliers of agricultural products. In 1988 the United States supplied 70 percent of Jordan's rice imports, 80 percent of the corn, and 25 percent of the wheat.

Following is a rundown of Jordanian imports:

- **Wheat**—Imports total around 450,000 tons annually. The major suppliers in 1988 were the United States and Saudi Arabia.

- **Rice**—Jordan is not a rice producer. Its imports were put at 85,000 tons in 1988, with the United States supplying about three-fifths of the total. Italy and Egypt also supplied small quantities.

- **Feedstuffs**—Jordan's modern poultry industry is based on imported feed, mainly corn, soybean meal, and concentrates. In 1988, imports of corn were put at 300,000 tons, of which 250,000 tons came from the United States. Imports of soybean meal reached 69,252 tons, of which the United States supplied 37,295 tons.

Food and feed grain imports from the United States in 1989 are projected to rise. However, because of Jordan's economic and debt situation, USDA credit and concessional programs will play an important role in realizing larger sales.

- **Oilseeds**—The principal import is sesame. China generally supplies about two-thirds of total imports.

- **Tobacco**—Jordan imports tobacco for blending with local leaf in the manufacture of cigarettes. At the same time, the country also imported \$1.9 million worth of cigarettes in 1988. The leading suppliers were the United States and the United Kingdom.

- **Cotton**—Jordan's entire cotton requirements are imported.

- **Meats**—Local production accounts for less than a fifth of red meat consumption; imports are required to fill the gap. Most red meat is imported chilled or frozen. The government is the sole importer of chilled meat, but the private sector has been allowed to import frozen meat in pieces.

Imports of chilled meat in 1988 reached 26,800 tons. Most chilled lamb and beef meat is imported from Bulgaria, Romania, and Turkey, while the frozen beef comes mostly from West Germany, and frozen lamb, from New Zealand and Australia. Beef imports from the United States are minimal—mostly high-quality cuts for the hotel and restaurant trade.

Trade policy and prospects

Jordan's economy is still showing effects of the "reverse oil shock" of the mid-1980's, which sharply cut the aid it was receiving from oil-exporting Arab countries as well as remittances from Jordanians working in the Gulf region.

The Government is under strong pressure to cut imports. A 45-percent depreciation in the dinar during 1988, on top of the country's heavy debt burden, has led to a number of austerity measures.

Among these were higher customs duties on selected commodities and a one-year ban on imports of luxury goods. Refrigerators and freezers are considered "luxury" imports, and their ban may affect demand for processed food items. ●

Kenya

K

Profile of agriculture

Over 70 percent of Kenya's population derives its livelihood from agriculture. However, the country is extremely short of good agricultural land. Out of the total area of 57 million hectares, only 17 percent is of high or medium agricultural potential, 75 percent is semiarid, and 8 percent is barren.

The agricultural sector's heavy burden is apparent when viewed against its need to produce enough food to sustain a population growing at the fastest rate in the world—3.9 percent annually, and at the same time generate over 60 percent of the

country's export earnings and employ over 70 percent of the workforce.

Kenya's rapidly expanding food needs have forced cultivation into its marginal, and environmentally fragile, areas. Productivity on these marginal lands is hampered by a lack of private investment in new irrigation projects.

At the same time, productivity on better agricultural lands is restricted by the fragmented land holdings, the increasing rate of environmental degradation, high costs of imported agricultural inputs, and burdensome governmental involvement in agriculture.

On the livestock side, the most developed sector is the dairy industry, where smallholders produce about 75 percent of the national output and large-scale farmers the rest. Some of the constraints to more rapid expansion in milk production include poor marketing and pricing systems, inadequate collection and poor roads, and insufficient coolers and refrigerated trucks.

Kenya's beef industry is concentrated in the marginal land areas with little crop potential. Development of the industry emphasizes rehabilitation of range and ranches and the strengthening of marketing, credit, and extension support.

The poultry industry has been growing but currently is facing problems of insufficient quality feeds. Higher costs for beef in recent years has increased the demand for eggs and poultry meat, particularly in major urban centers.

Production highlights

Favorable weather in 1988 produced significant gains in output of most crops over year-earlier levels. Of the major cash crops, production of tea increased 5 percent to 164,030 tons, pyrethrum (a natural pesticide) by 10 percent to 7,200 tons, and sisal marginally to 37,000 tons. All grains showed sizable improvements and corn output was at a near-record level.



Kenya at a Glance

Population (1988): 23.3 million

Urban population: 3.9 million

Population growth rate: 3.9%

Per capita gross national product (1988): \$402

Arable land area: 9.94 million hectares

Major crops: Cash crops—coffee, tea, sisal, pyrethrum, cotton; food crops—corn, wheat, sugarcane, rice, beans

Livestock sector: Dairying is most developed sector; some poultry and eggs; beef industry concentrated on marginal lands

Leading agricultural exports: Coffee, tea, pineapples, other horticultural produce

Leading agricultural imports: Vegetable fats and oils, wheat, rice, refined sugar

Agricultural imports as share of total imports: 5.7%

U.S. share of total agricultural imports: 11.2%

Percent of population in agriculture: 70+%

Agricultural Production

	1986/87	1987/88
	<i>metric tons</i>	
Crop production ¹		
Cash crops:		
Coffee	105,000	119,100
Pineapple	190,500	215,000
Tea	164,030	N/A
Food crops:		
Corn	2,859,000	2,800,000
Pyrethrum	102	N/A
Rice	23,000	24,000
Sugar	411,614	240,000
Wheat	245,000	250,000

Livestock numbers ²

	1986
	<i>millions</i>
Beef cattle	0.36
Dairy cows	0.26
Hogs	0.01
Poultry	0.24
Sheep	0.35

¹ Crop years are Oct.-Sept. for coffee; calendar years for tea, pineapple, and sugar; July-June for corn, rice, wheat, and oilseeds.

² Livestock numbers represent 1986 data for large-scale enterprises. No data are available for small holder sector or for more recent years.

Coffee production, however, was down 7 percent to 105,000 tons—due to the biennial bearing cycle of the crop, depressed prices, and higher input costs that caused producers to cut back on their use of inputs.

Production of milk and eggs and poultry meat rose in 1988; however, further growth is being hampered by the lack of quality feed ingredients.

Value of Agricultural Imports, July-June 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Essential oils	0.1	N/A
Rice	—	2.9
Vegetable seeds	0.3	N/A
Wheat	11.5	11.5
Others	2.2	111.5
Total²	14.1	125.9

¹ Values are shown in U.S. dollars at US\$1=18.6 Kenyan shillings. Includes commercial and concessional imports.

² Includes products not listed above.

Farm and food policy

The Government sets the producer prices for such major commodities as corn, wheat, sugarcane, and cotton with an eye to encouraging larger production, reducing imports, and following broad import and export parity principles. With the exception of cotton, these farm prices are close to world market levels.

The main determinants of the development of Kenya's food sector are the weather and the level of Government incentives to producers. Farm prices for corn, wheat, rice, sugar, and cotton are all controlled to some extent by the Government.

The Government does not set domestic prices for coffee and tea exports and growers receive approximately world market prices, excluding marketing costs and export taxes.

The Kenyan Government also sets consumer prices for items such as wheat, flour, cornmeal, and vegetable oils. These prices are kept deliberately low in order to favor urban consumers. However, Government price controls have been

relaxed for such "nonessential" items as baby foods, fruit drinks, and meats.

Government control of domestic grain marketing is gradually being liberalized to allow increased private trade and to reduce the Government's role to that of guardian of national stocks. The Government also has expanded the number of licensed distributors of fertilizer and other inputs whose supplies have become more accessible in the past several years. However, the majority of small farmers still can't get the credit they need.

The Government is focusing on irrigation projects as one of the best means of increasing food production. Special emphasis is being given to low-cost, small-scale furrow systems based on simple river diversions, shallow wells, gravity systems, and small pumps. The Government also is developing technical packages for integrated crop, livestock, and agro-forestry systems.

The Government is sponsoring research on drought-resistant crops and is providing support for the use of quick-maturing varieties in marginal land areas. Attention has focused on such crops as sorghum, millet, beans, pigeon peas, cow peas, grams, and oil sunflowerseed.

The Government also is encouraging the improvement of on-farm grain storage facilities and the construction of additional large national storage depots.

Imports and exports

Kenya's main agricultural imports in 1988 were vegetable fats and oils, wheat, and refined sugar.

Agricultural exports, valued at \$681 million in 1988, represented about 60 percent of Kenya's total export value. Higher prices for coffee, tea, and other major export commodities were responsible for increased export earnings.

Exports of nontraditional crops such as pineapple and horticultural produce are increasing.

The European Community—particularly the United Kingdom, West Germany, and the Netherlands—was the biggest buyer of Kenyan exports.

Although the United States maintains a positive trade balance with Kenya, U.S. export performance in the Kenyan market increased only marginally in 1988, after improving significantly in 1987. Only 5 percent of Kenya's total exports are destined for the United States. Manufactured products form a large part of this trade; agriculture accounts for about 15 percent.

Best prospects for U.S. exporters in the agricultural sector include fertilizers, pesticides, veterinary supplies, low-technology machinery, and management services. For agricultural commodity exports, opportunities exist for wheat, limited quantities of processed and high-value foods, vegetable oils, tallow, livestock breeding material, seeds, and a variety of specialty goods.

Trade policy and prospects

Kenya continues to experience chronic foreign exchange and balance of payments problems which limit its capacity to import essential and nonessential commodities. Recent policy initiatives are aimed at decreasing dependence on wheat imports.

The Government is slowly liberalizing its import licensing and tariff structures to reduce the extent of direct control. However, many importers still have trouble obtaining import licenses and foreign exchange allocations on a timely basis.

Regarding tariffs, the specific rates of duty vary depending on whether an import is considered essential or a luxury.

Kenya's membership in such trade protocols as the Preferential Trade Area (PTA) Agreement and the Lome Convention affects the competitiveness of U.S. exports. ●

Korea

Profile of agriculture

Korea's agricultural sector is characterized by small owner-operated farms with an average size of only 1.1 hectare. Rice is the predominant crop, although increased consumer demand is stimulating production of livestock products, vegetables, and, to a much lesser degree, fruits.

In 1988, Korean agriculture continued to decline in economic importance. The sector contributed about 15 percent to the gross

national product and employed about a fifth of the labor force.

Korean farmers in 1988 continued to press for political rather than economic solutions to their problems. Farmers demanded—and received—a double-digit increase in the 1988 government rice procurement price and a substantial increase in the agricultural budget, over the opposition of Government economic planners who feared inflation.

Production highlights

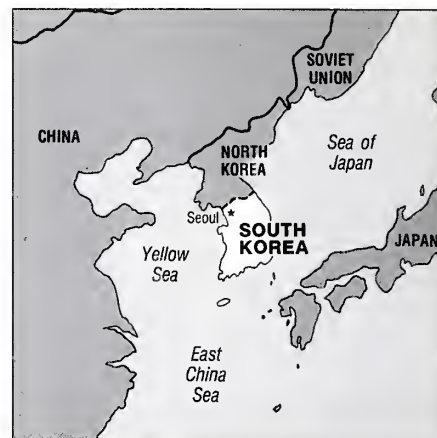
Perfect growing conditions and no typhoons led to the biggest rice crop in Korea's history in 1988, some 6 million metric tons. Barley production also benefited from good weather.

Compound feed output totaled 9.8 million tons in 1988, an increase over 1987 of 8 percent, below the long-term average gain. Output for swine and dairy cattle rose 22 and 15 percent, respectively, but output for poultry was flat and output for beef cattle fell 10 percent as herd size diminished.

The beef sector underwent serious adjustment in 1988. Prices rose sharply as demand outstripped supply, forcing the Government to make the politically unpopular move of resuming imports of beef in August 1988. Despite imports, retail beef prices continued to soar, up 48 percent between January and December 1988. Cattle numbers plummeted and live cattle prices rose to record highs.

Overall fruit production rose. The pear crop was especially large. The 1988 Cheju-do tangerine crop was small but of high quality, reducing supplies of off-grade fruit for processing. Demand for orange juice is outstripping supply; the 1989 import quota was exhausted by January 1989.

Vegetable production rose only slightly despite strong consumer demand. The dry autumn hurt most late vegetables except red peppers.



Korea at a Glance

Population (forecast mid-1989): 42.4 million

Urban population: 35.1 million

Population growth rate: 1.0%

Per capita gross domestic product (1988): \$4,095

Arable land area: 21,379 square kilometers

Major crops: Rice, vegetables, fruit

Livestock sector: Swine, beef, poultry

Leading agricultural exports:

Leather, leaf tobacco, chestnuts, ginseng products

Leading agricultural imports: Hides and skins, cotton, animal feed ingredients (corn and soybeans), wheat

Agricultural imports as share of total imports: 11%

U.S. share of total agricultural imports: 47%

Percent of population in agriculture: 20%

Farm and food policy

The stated goals for Korea's farm and food policies in 1989 are a move away from past emphasis on self-sufficiency, except for rice. Instead the focus is on the need to narrow the gap between rural and urban incomes through better infrastructure, improved off-farm income opportunities, and greater efficiency.

Methods of accomplishing these goals include increasing mechanization, road building, auxiliary farm production—such as folk handicrafts, tax relief, land tenure adjust-

Agricultural Production

	1988	1989
	<i>thous. metric tons</i>	
Crop production		
Apples	640	645
Barley	561	552
Chinese cabbage	2,375	2,520
Green onions	540	542
Radish	1,695	1,700
Rice	6,053	5,472
Sweet potatoes	560	637

Livestock production

	<i>thous. metric tons</i>	
Beef ¹	195	120
Butter ²	3,830	4,200
Cheese ²	2,416	3,500
Chicken	149	156
Eggs	397	415
Milk	1,561	1,850
Pork	425	466

Livestock numbers³

	<i>thous. head and mil. birds</i>	
Beef cattle	1,923	1,559
Broilers	16	17
Dairy cows	463	475
Hogs	4,281	4,851
Lavers	43	44

¹ Carcass weight basis.

² Metric tons.

³ Estimated as of January 1 each year.

Value of Agricultural Imports, 1988¹

	<i>Imports from</i>	
	<i>United States suppliers</i>	<i>All other suppliers</i>
	<i>\$ millions²</i>	
Selected products		
Corn	475	581
Cotton	487	718
Furs and furskins	31	204
Hides and skins	751	977
Leather	79	553
Soybeans	291	293
Soybean meal	³	101
Sugar	³	263
Wheat	312	536
Wool	7	442
Total⁴	2,651	5,597

¹ Actual 1988 Korean Government trade data, CIF basis.

² Values are shown in U.S. dollars at US\$1 = 730.60 won. Includes commercial and concessional imports.

³ Less than \$500,000.

⁴ Includes products not listed above.

ments, the development of a futures market, and debt relief.

The Korean Government has long been heavily involved in domestic agricultural markets. Because of the dominance of rice and barley production, policies pertaining to food grains are central to farm policy. The Government is authorized to buy enough grain from farmers each year so that it can stabilize the national economy through control of grain distribution and manipulation of Government stocks.

On the food side, Government production policies and an inefficient marketing system, combined with a restrictive import policy, make urban Korean consumer food

prices among the highest in the world in terms of the share of income spent on food.

The Korean diet is still high in carbohydrates and extremely low in fat. However, as household incomes grow, consumption is shifting away from grains toward animal products.

Imports and exports

Korea's total agricultural imports reached a record-high \$5.60 billion in 1988, a 33-percent increase over 1987. The U.S. share remained steady both years at 47 percent. (Note: These data exclude forest and marine products.)

Korea's agricultural imports are dominated by bulk raw materials for industrial use or for animal feed. Most of the increase in value in 1988 was due to higher prices for basic commodities.

Korean imports of hides and skins, the most valuable single import item, rose 24 percent to \$977 million, but import volume was virtually the same as in 1987. Imports of corn rose 42 percent in value, but only 12 percent in quantity.

Principal commodities which recorded substantial increases in volume imported included soybean meal, up 54 percent; rapeseed meal, up 40 percent; and finished leather, up 37 percent. High corn and soybean prices pushed up imports of substitutes such as sorghum, rye, protein meals, and tapioca.

Wheat imports in 1988 totaled 4.1 million tons, of which 1.9 million metric tons was feed wheat. Milling wheat imports remained stable as overall consumption of wheat-based products remained unchanged. Nevertheless, consumption of instant noodles, bakery products, and confectionery products has increased, while less and less wheat is used to make "makkoli," a traditional fermented beverage.

Among consumer products, imports of dairy products, bananas, and grapefruit all showed increases.

By year end, beef imports totaled \$43 million.

Products for which the U.S. market share rose significantly in 1988 included cotton, beef, fishmeal, dairy products, and raisins. The U.S. share of Korean cotton imports jumped from 48 percent to 68 percent in value.

Korea's agricultural exports also showed strong growth in 1988, rising 38 percent in value to \$998 million, not including any marine products. Exports of finished leather rose 68 percent to \$119 million. Leaf tobacco exports rose 43 percent to \$87 million, with significant sales to the Soviet Union and Eastern Europe.

Exports of confectionery and baking mixes quadrupled, and exports of both canned vegetables and frozen fruits more than doubled in value. Traditional export items—chestnuts at \$81 million, and apples and pears at \$25 million—also showed gains. Exports of pork, mostly to Japan, reached \$40 million.

Trade policy and prospects

The Korean Government protects its domestic agriculture through a number of trade restrictive measures such as tariffs, quotas, and other trade barriers. Political leaders from all sides insist they will continue to protect farmer interests, but at the same time international pressure to open Korea's market may force some liberalization. In addition, export-oriented Government economic agencies appear to favor market opening as a way to reduce upward pressure on currency, wages, and demand inflation.

Although Korea's tariffs will be reduced according to a new 5-year tariff schedule, many items important to the United States will continue to have high tariffs even after the 5-year reduction plan is complete. In addition, many agricultural products remain on the import-restricted list and others are subject to excessive plant quarantine restrictions. ●

Liberia

Profile of agriculture

Agriculture is the largest sector in the Liberian economy, contributing about a third of the country's gross domestic product. The country is richly endowed with an ample water supply, mineral resources, and a climate favorable to the cultivation of many agricultural products.

Commercial agriculture includes forestry, rubber, cocoa, coffee, and poultry. Traditional agriculture includes rice, cassava, sugarcane, corn, and palm oil produced from wild palm groves.

Farming systems vary but can be characterized into four broad types:

- Foreign-owned concessions and plantations, primarily in the rubber and forestry sectors.
- Liberian-owned commercial farms (averaging about 3 hectares

each) producing rubber, poultry, hogs, coffee, cocoa, oil palm, rice, and vegetables.

- Government-managed plantations of coffee, cocoa, and oil palm.
- Traditional farms accounting for about 90 percent of all agricultural households. The average household size is 6.2 persons cultivating about 1.5 hectares.

Shifting cultivation on the uplands is still the dominant form of agriculture. Under shifting cultivation, secondary forest is cleared and burned; 1 or 2 years of cultivation follows after which the land is returned to bush fallow for periods averaging 8 to 10 years before a new production cycle is started.

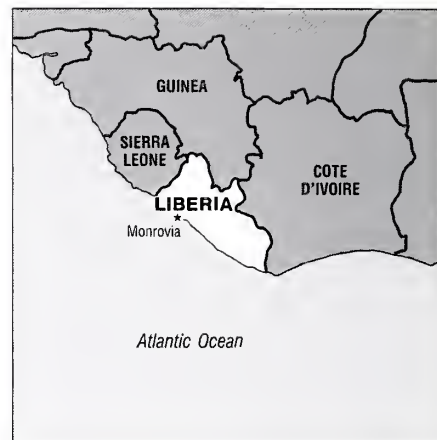
Livestock production is of only minor importance because of unsuitable climatic conditions (particularly for cattle), the absence of natural pastures, the virulence of animal diseases, and the absence of a livestock raising tradition.

Production highlights

About 27 percent of Liberia's agricultural households grow cocoa. Area under cocoa is estimated at 29,400 hectares, of which 73 percent is bearing. Tree density varies from farm to farm, but the total number of trees is estimated at 40 million. The harvest season is from October to February. Production potential is estimated at between 5,000 and 6,000 metric tons annually.

About 26 percent of Liberia's agricultural households grow coffee. Small farmers produce the bulk of the crop. Coffee exports in 1987/88 totaled 3,331 tons compared to 4,000 tons the previous season. Coffee marketing and export were hampered by the Government's lack of currency to pay farmers. However, at the beginning of 1989 the Government indicated it would allow coffee farmers who cultivate over 100 hectares to export directly.

Citrus is a cash crop for about one-fifth of Liberia's agricultural households. Production was last



Liberia at a Glance

Population (1987): 2.4 million

Urban population: 1.1 million

Population growth rate: 3.3%

Per capita gross domestic product (1987): \$301

Cultivated area: 555,000 hectares

Major crops: Forestry, rubber, cocoa, coffee, rice, cassava, sugarcane, corn, palm oil

Livestock sector: Poultry

Leading agricultural exports:

Rubber, logs and timber, coffee, cocoa

Leading agricultural imports: Rice, vegetable oil, meat and meat products, sugar, milk products, grocery products

Agricultural imports as share of total imports: 24%

U.S. share of total agricultural imports (includes some assumed freight costs): 40%

Percent of population in agriculture: 48%

Agricultural Production

	1987	1988
	<i>metric tons</i>	
Crop production		
Cassava	300,000	300,000
Citrus	16,000	16,000
Cocoa	5-6,000	5-6,000
Coffee ¹	95	80
Logs ²	810,275	676,901
Palm oil	25,000	25,000
Rice (rough)	288,000	398,000

	1986	1987
	<i>head</i>	
Livestock numbers ³		
Beef cattle	14,040	14,530
Goats	123,800	129,330
Pigs	46,900	54,800
Poultry (mil) ⁴	796,900	786,900
Sheep	57,500	60,410

¹ Data are in thousand 60-pound bags.

² Data in cubic meters. 1987 data are for full year. 1988 for January-June only.

³ Estimated yearly averages.

⁴ Poultry raised by traditional farming households only.

estimated in 1985 at 16,000 tons. Oranges account for about 81 percent of sales, tangerines 11 percent, and grapefruit 8 percent.

Nineteen percent of Liberia's agricultural households produce sugarcane. Area devoted to sugarcane production is estimated at 20,675 hectares. Average farm size is 0.5 hectare.

Management of Liberia's oil palm estates is overseen by the Government. Total area planted to palm estates is estimated at about 12,000 hectares. Production of palm

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States¹</i>	<i>All suppliers</i>
	<i>\$ millions</i>	
Selected products		
Cattle	0	2.0
Meat/meat products	0.1	4.8
Milk, dry/condensed	0.1	3.0
Rice	19.1	32.0
Sugar	²	3.2
Tobacco and products	0	2.2
Vegetable oil	0.2	5.6
Vegetables/products	1.5	2.7
Wheat/wheat flour	1.1	1.8
Other	1.7	14.9
Total³	23.8	72.2

¹ U.S. exports FOB.

² Less than \$50,000.

³ Liberian imports CIF.

oil from both estates and wild groves is put at 25,000. Low yields on formal plantings are primarily due to poor soils, no funds for fertilizer, and lack of management.

No area estimates of wild palm groves are available. However, nearly 45 percent of agricultural households make palm oil from fruit bunches collected from wild groves.

Livestock production is of only minor importance in Liberia. The total number of cattle raised on traditional farms in 1987 was put at 14,530 head, up very slightly from the year before. There was also an increase in the number of goats, but a slight decline in the number of poultry. Chickens represent 95 percent of the birds on traditional poultry farms and ducks, 5 percent. Slightly less than 800,000 chickens are raised on noncommercial farms.

The most recent survey of the commercial poultry sector was taken in 1985. At that time there were 270

commercial poultry farms raising 819,000 broilers. Egg sales from 65 producers totaled 1.16 million dozen.

Logging is the third most important and the fastest growing industry in Liberia. The number of active companies is increasing, and logging operations are expanding. Timber exports are a key factor maintaining Liberia's trade surplus.

Liberia's primary rainforest covers a little less than half the country, about 18,000 square miles, and constitutes one of the only significant stands left in West Africa.

While some 30,000 hectares of forest are logged or burned each year, less than 9,000 hectares of forest has been planted over the last 15 years. About half of these trees are now useless due to poor management or improper choice of species. Most firms do not see the timber industry in Liberia as one with sustained commercial viability beyond 5 or 10 years.

Farm and food policy

The Government launched a "Green Revolution" program in 1987 with the goals of: (1) increasing agricultural productivity and thereby ensuring self-sufficiency in food production, (2) improving farmers' socio-economic conditions through cooperative and integrated development, thereby reversing rural-urban migration, and (3) increasing the awareness of Liberian society of the importance of agriculture in general.

In the near-term, food self-sufficiency is not considered likely. Liberia is expected to remain dependent on imported rice, wheat, and other processed foods for many years to come—given the current cultural practices, farmer incentives, undeveloped marketing system, and the slow rate at which farmers are able to adopt new techniques.

However, the "Green Revolution" program is attempting to create opportunities for subsistence farmers to earn adequate income from

farming, to make more productive use of Liberia's agricultural resources, and to increase agricultural output within the limits of technical and economic viability.

Imports and exports

The export of basic commodities—chiefly iron ore, rubber, logs and timber, coffee, cocoa, gold, and diamonds—provides over 95 percent of Liberia's export income and over half of its gross domestic product.

The year 1988 was the best in a decade for Liberia's economy due to an economic resurgence in the rubber industry and the rapid growth in forest product exports. The value of the country's total exports rose by an estimated 25 percent to approximately \$500 million.

Liberia's imports consist primarily of petroleum products, foodstuffs, machinery and parts, and transportation equipment.

Liberian exports of agricultural products to the United States consisted chiefly of rubber. The country's agricultural imports from the United States were comprised mostly of rice, wheat, and miscellaneous grocery products.

Trade policy and prospects

Persistent budget deficits and capital flight have placed a severe strain on the Liberian monetary system. To obtain needed foreign exchange, the Government requires exporters to surrender 25 percent of their export earnings for Liberian coins at the official par rate of exchange.

Liberia's trade suffers from inadequate and, in some sectors, deteriorating infrastructure. Liberia has over 6,000 miles of roads, of which roughly 400 miles are paved. Ninety-five percent of its imports pass through Monrovia. Once a major transshipment port, high fees and tariffs and weak management have greatly reduced the flow of cargo. ●

Malaysia

Profile of agriculture

Agriculture is the largest employer in Malaysia. About 31 percent of the working population of the country is employed in some aspect of the agricultural sector.

Growth in the agricultural sector during 1988 was estimated at 4.8 percent, compared to 7.0 percent in 1987. The decline was due to no increase in the production of sawlogs (versus a 21-percent in-

crease in 1987), as well as slower growth in cocoa output (1988 production was up 20.5 percent versus an increase of 40.7 percent in 1987), and a 25-percent decline in cocoa prices.

Beside forest products, palm oil, rubber, and cocoa, other major commodities include rice, coconut, cocoa, pineapple, and sugar. The livestock sector also has been growing steadily over the last several years.



Malaysia at a Glance

Population (1988): 17.0 million

Urban population: 6.5 million

Population growth rate: 2.4%

Per capita income (1988): \$1,938

Arable land area: 131,900 square kilometers

Major crops: Forest products, rubber, palm oil, cocoa, rice, coconut, pineapple, sugar

Livestock sector: Poultry, pork, beef

Leading agricultural exports: Forest products, rubber, palm oil, cocoa, palm kernel oil, pineapple

Leading agricultural imports: Fruits and vegetables, dairy products, sugar, corn, wheat, soybean, cotton, rice

Agricultural imports as share of total imports: 12%

U.S. share of total agricultural imports: 8%

Percent of population in agriculture: 31%

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Cocoa	0.19	0.23
Copra	0.24	0.23
Palm kernel	1.31	1.47
Palm oil	4.53	5.03
Pepper	0.02	0.02
Pineapples	0.18	0.19
Rice (milled)	1.09	1.08
Rubber	1.58	1.66

	1986	1987
	<i>millions</i>	
Livestock numbers ¹		
Buffalo	0.16	0.14
Cattle	0.56	0.58
Goat	0.26	0.27
Hogs	1.61	1.77
Sheep	0.09	0.13

	1988	1987
	<i>tons</i>	
Animal products		
Beef (buffalo)	3,413	3,393
Beef (cattle)	8,895	8,972
Eggs (million)	3,347	3,450
Milk (mil.liters)	24	25
Mutton (goat)	485	386
Mutton (sheep)	101	110
Pork	147,510	155,064
Poultry meat	239,200	270,500

¹ Estimates as of December 31 of each year.

Production highlights

Fueled by continued strong export demand for logs and wood products, Malaysia's total tropical hardwood log production reached 36.2 million cubic meters in 1988, virtually unchanged from 1987.

Palm oil production rose 11 percent in 1988 to 5.0 million tons. This was the result of an increase in area planted, ideal growing conditions, and increased use of fertilizer. Malaysia remains the largest palm oil producer in the world and accounts for 23 to 25 percent of the world's vegetable oil trade. Malaysia also produced 624,000 tons of palm kernel oil in 1988, up 8 percent from 1987.

Cocoa production jumped 20 percent in 1988 to 229,000 tons. Over the last 10 years, cocoa production in Malaysia expanded eight-fold. The country was the world's third largest cocoa producer in 1988 behind Cote d'Ivoire and Brazil.

Lower yields due to crop diseases and pests caused rice production to decline in 1988 by about 7 percent. Rice production for the year was 1.08 million tons.

Total pineapple production reached nearly 200,000 tons in 1988, an increase of 16,000 tons when compared to 1987. The bulk of the output was processed into canned pineapple or juice.

Dry weather during a critical growing stage for sugarcane in 1988 caused sugar production in Malaysia to fall about 10 percent below 1987

levels. Domestic production accounted for less than 14 percent of total domestic sugar use.

Livestock and meat production increased in 1988 as a result of greater domestic consumption and a growing export market for pork and poultry meat. Fruit production grew as well. These trends are continuing.

Farm and food policy

Malaysia allocated nearly two-thirds (about \$2 billion) of its total 1989 development budget to the rural sector. Specific agricultural allocations included \$500 million for

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Corn	26.7	171.2
Cotton	9.8	55.5
Dairy products	3.8	176.0
Fruits/vegetables	37.5	224.2
Rice	0.0	83.4
Soybeans	16.0	102.9
Sugar	.3	178.7
Tobacco	24.2	31.6
Wheat	8.4	123.1
Total²	155.5	1,945.9

¹ Values are shown in U.S. dollars at US\$1 = 2.60 ringgits.

² Includes products not listed above.

new land development and \$200 million for land rehabilitation.

The fruit industry, a priority under the country's national agricultural policy, has benefited from increased Government attention in recent years. Production and exports of fruit increased sharply in 1988 as a result. The fruit sector is comprised mostly of small-scale operations. However, the Government is encouraging development of the industry on a commercial scale.

The Government is also trying to encourage greater vegetable production, both to reduce dependence on imports and to tap lucrative export markets such as Singapore. Total fruit and vegetable exports were nearly \$116 million in 1988.

The Government is encouraging expansion of the livestock industry to match increasing domestic and export demand for livestock and livestock products. While already exporting hogs, chickens, and chicken meat, Malaysia must import more

than half of its domestic beef requirements.

The Government also is promoting domestic milk consumption and helping to meet the demand for fresh milk through milk collection centers and dairy cattle breeding farms.

While tropical wood product exports are an important source of foreign exchange for Malaysia, especially for East Malaysia (Sabah and Sarawak), the Government has come under increasing pressure from environmentalists to reduce the rate of logging in the country. To address these criticisms and to ensure continued forest revenues, the Government has implemented a selective logging scheme, in addition to reforestation projects for logged-over areas.

Imports and exports

Imports in 1988 were led by cereal products, followed by fruits and vegetables, dairy products, sugar, and soybeans. With continued strong economic growth will come continued import increases of these products.

While imports of U.S. agricultural goods grew during 1988, the overall U.S. share of the agricultural import market fell slightly. This was largely due to increased purchases of various commodities (wheat, rice, and soybeans) which the United States does not normally supply to Malaysia.

Recently, cotton imports from Cote d'Ivoire, Pakistan, and China have displaced U.S. cotton due to higher U.S. prices.

Malaysia's agricultural export earnings increased in 1988 mainly because of increased exports of rubber and palm oil. While actual export volumes of rubber and palm oil were basically unchanged from 1987, the higher prices allowed earnings to increase by 34 and 37 percent, respectively.

Wood and wood products remained the largest Malaysian

exports in 1988, growing about 11 per cent. The volume of cocoa exports increased sharply, but lower prices limited growth in export value to only about 4 percent.

The country's palm oil exports were about 4 million tons in 1988, about the same as 1987 levels. Exports are expected to surge to 4.6 million tons in 1989, with larger shipments to China, Iran, and Pakistan accounting for much of the increase. The country also is developing the Middle East as a palm oil market, too.

The positive trade balance in agriculture helped to counter a negative balance in nonagricultural merchandise trade.

Exports of Malaysian textiles and garments reached an estimated \$1.2 billion in 1988, a 32-percent increase over 1987. Reflecting this growth, cotton imports during 1988 were over 33,000 tons compared to about 31,000 in 1987. Good prospects for continued expansion in the textile and garment industries may lead to increased cotton imports.

Trade policy and prospects

Negative publicity about tropical oil in the United States is a major trade policy issue in Malaysia. The Government and palm oil industry are concerned about the possible passage of a labeling law in the United States discriminating against palm oil. Anti-palm oil advertising by some U.S. organizations has drawn the ire of Malaysians.

The Malaysian palm oil industry launched a palm oil promotion campaign to counter the anti-palm-oil advertising in the United States.

Malaysia also has been criticized by environmentalists for the alleged rampant logging of the Malaysian tropical forests. In Europe, various groups have attempted to force implementation of a surcharge or even a ban on imports of tropical timber. The Government has countered these charges pointing to its efforts to control logging. ●

Mexico

Profile of agriculture

Mexico's agricultural sector accounts for 9 percent of gross national product (GNP). Although the proportion of GNP generated by agriculture has declined as the industrial and service sectors have grown, about a third of the population still lives and works in rural, largely agricultural, areas.

Wheat, sorghum, oilseeds, cotton, sugarcane, vegetables, and forage crops are produced on large, irrigated farms in the arid north.

Small, nonirrigated farms in central Mexico rely heavily on staples such as corn and beans. There is some diversification toward feed grains, oilseeds, and fruits and vegetables, particularly near Mexico City.

The tropical regions of southern Mexico produce coffee, rice, sugarcane, and traditional plantation crops.

Cattle operations are concentrated in the northern and gulf states, where livestock is largely range-fed. Pork and poultry operations are

decentralized, and production is more intensive in modern, commercial operations.

Production highlights

For the past three seasons, Mexico's total crop production has decreased. Drought, frosts, hurricanes, low reservoir levels, low guarantee prices, tight credit, and high input costs all contributed to the decline.

In 1988, while corn, safflower, and cottonseed production increased, wheat, rice, dry beans, soybeans, and barley production declined from 1987 levels.

Overall, total grain production declined about 2 percent while oilseed output decreased about 11 percent.

Beef cattle numbers rose about 1 percent, mainly because of good forage and feed supplies and weak domestic demand.

Swine numbers decreased some 8 to 10 percent, reflecting low profit margins and strong competition from U.S. imports. The poultry industry faced similar conditions.

A significant number of small- and medium-size farm operations liquidated herds and flocks due to fixed consumer prices and rising feed costs resulting from poor economic conditions.

Near-term prospects for agricultural production do not appear particularly bright, although an expected return to normal weather and above-average reservoir levels should place Mexico's 1989 production well above 1988 levels.

Farm and food policy

The Government has been involved in all aspects of the country's food system since the 1930's. In 1988, Government efforts to expand agricultural production faced continued problems, reflecting an uncer-



Mexico at a Glance

Population (1988): 83 million

Urban population: 48 million

Population growth rate: 1.9%

Per capita income (1988): \$1,580

Arable land area: 230,764 square kilometers

Major crops: Corn, beans, oilseeds, feed grains, fruit, cotton, coffee, sugarcane, winter vegetables

Livestock sector: Cattle, hogs, poultry

Leading agricultural exports: Cattle, cotton, coffee, meat, sugarcane, tomatoes

Leading agricultural imports: Dry beans, corn, feed grains, horticultural products, sorghum, soybeans, wheat

Agricultural imports as share of total imports: 12%

Percent of population in agriculture: 26%

tain economic situation and weather-related problems.

Low public sector spending and high real credit costs minimized efforts by Government agencies to expand technical and extension assistance.

The Government guarantees that it will buy basic crops at support prices through CONASUPO, its regulatory agency for agricultural commodities. These basic crops

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop Production		
Beans	1.07	1.10
Corn	10.00	9.90
Cotton	.13	.22
Oilseeds	1.28	1.38
Sugarcane	3.97	3.80
	1987	1988
	<i>millions</i>	
Livestock numbers		
Beef cattle	33.6	35.4
Dairy cows	2.1	2.2
Hogs	12.3	10.8
Poultry layers	71.0	67.0
Poultry meat	515.0	443.0

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions ¹</i>	
Selected products		
Beans, dry	3.7	13.6
Corn	381.1	393.8
Other feed grains	7.5	3.3
Fruits, fresh/dried	11.8	7.2
Sorghum	134.6	138.2
Soybeans	346.9	137.2
Wheat	97.0	137.2
Total ²	N/A	2,996.0

¹ Values are shown in U.S. dollars at US\$1=2,257 pesos.

² Includes products not listed above

include corn, beans, wheat, sorghum, soybeans, rice, safflowerseed, and cottonseed.

Government purchases of crops have maintained average rural prices close to support levels, but generally have failed to provide increases in real producer prices (adjusted for inflation). Mexican support prices periodically fall below U.S. and world prices.

The producer guarantee price system was partially abandoned in 1988, with some basic grains having no "official" price increases. Other increases were announced only after planting was completed.

Disenchantment with producer prices drove many farmers to lower the overall area planted to basic crops. In some areas, yields suffered as production costs increased and use of inputs declined.

The Government continues to favor food self-sufficiency. However, wheat is the only major food item that is produced in sufficient quantities to satisfy domestic demand.

Imports and exports

In 1988, Mexico's total agricultural imports, valued at \$2.9 billion, increased by nearly 90 percent over 1987. The principal factors accounting for the sharp growth include the severe drought; opening of its market as part of Mexico's accession to the General Agreement on Tariffs and Trade; and the relative strength of the peso vis-a-vis the dollar.

The United States remained Mexico's predominant agricultural supplier, with feed grains, wheat, oilseeds, vegetable oils, livestock and products, and planting seeds making up the bulk of Mexico's purchases. Canada, Australia, and Argentina were the other major suppliers.

Mexico's exports of agricultural products increased over 10 percent in 1988.

Agricultural exports totaled \$2.5 billion, most of which went to the United States. Coffee, fresh vegetables and fruit, live animals, and animal products accounted for the bulk of U.S. imports from Mexico.

Trade policy and prospects

Although the private sector's role in agricultural trade is increasing, the major thrust of agricultural trade policy has been Government control of the imports and exports of essential foodstuffs and agricultural raw materials.

The role of CONASUPO is being cut back, but the Government continues to control imports of many agricultural products, particularly bulk commodities such as feed grains, wheat, rice, livestock, and animal products.

Imports of basic commodities are authorized only when the entire domestic crop has been purchased.

Diversification of food import sources is also a recent trade policy objective.

During the past year, the Mexican market has opened up significantly for high quality beef and

poultry; dairy products; select fruits, vegetables and nuts; wood products; animal feed; wine, beer, and other alcoholic beverages, which presents new market opportunities for U.S. exporters.

Mexico's import licensing system is the cornerstone of Mexico's import substitution strategy. Licensing has served as Mexico's most effective method for controlling imports during unstable financial periods. This practice, and the erratic process of issuing licenses, discourages trade by creating an uncertain situation for both Mexican importers and foreign suppliers.

Under intense public and media pressure to reduce imports and protect the domestic industry, the Government is reviewing tariff levels with an eye to increasing them. U.S. exports to Mexico could be reduced if tariff levels are raised significantly, particularly on processed products and livestock products. The Government has increased import duties on several livestock products such as swine meat and offals.

The Government also plans to implement more rigorous quality and health and safety rules for imported agricultural products. ●

Netherlands

Profile of agriculture

After its water, which makes the Netherlands a major transportation center, fertile soil well suited for agriculture may be the next most important Dutch natural resource. Historically, agriculture has been so important to the Netherlands that the Dutch have devoted centuries to transforming sea bed into farmland through an elaborate system of pumps, dikes, and polders.

The Netherlands is approximately half the size of New Jersey. Currently, 30 percent of its 33,940 square kilometers of land area lies below sea level. Most of these lowlands are in agricultural use and the area of reclamation continues to grow.

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop production¹		
Coarse grains	0.3	0.3
Corn for silage	2.7	2.2
Potatoes	6.9	6.9
Sugar beets	7.7	6.9
Wheat	0.9	0.9

	1987	1988
	<i>thousands</i>	
Livestock numbers²		
Beef cattle	1,210	1,174
Breeding cattle/ calves	1,585	1,564
Chickens	96,827	93,043
Dairy cows	2,100	1,970
Ducks and turkeys	1,493	1,634
Hogs	14,349	13,925
Horses and ponies	64	68
Poultry, other	348	393
Sheep	985	1,169

¹ Crop years are July-June.

² Estimates as of May each year.

Dutch agriculture can be classified into four scales of production: large farms, small farms, glass house horticulture, and market gardens. The latter group is not represented in official statistics but large gardens traditionally have been important to the domestic vegetable market during the growing season.

Large and small family farms generally are as efficient as their U.S. counterparts, producing grain, potatoes, sugar beets, milk, meat, and other products. Commercial flower bulbs are also grown on a large scale and shipped throughout the world.

Glass house or greenhouse horticulture comprises a major agricultural sector as it allows the year-round cultivation of food and flower products in spite of the cool, marine climate and frequent storms. The Netherlands boasts approximately 9,200 hectares of greenhouse production capacity growing vegetables, potted plants, mushrooms, and cut flowers. Fresh-cut Dutch flowers are shipped and sold throughout the world daily.

Dutch agriculture accounts for approximately 10 percent of the country's total gross domestic product and around 5.8 percent of employment.

Production highlights

Agriculture in the Netherlands saw a good year in 1988 with favorable growing conditions and generally higher prices over the previous year.

Grain production finished up over 10 percent higher than during 1987 due to an 11.5-percent increase in planted area. The planted area of potatoes and sugar beets was down 5 percent and 4 percent, respectively, with significantly lower yields for potatoes.

Horticulture continued to fare well in 1988, especially in the fruit, cut flower, and potted plant sectors.

In the livestock sector, better results in 1988 came primarily as a



The Netherlands at a Glance

Population (1988): 14.6 million

Urban population: 7.5 million

Population growth rate: 0.6%

Per capita GNP (1988): \$15,275

Arable land area: 8,485 square kilometers

Major crops: Cut flowers, flower bulbs, mushrooms, potatoes, sugar beets

Livestock sector: Beef, dairy products, eggs, pork, poultry

Leading agricultural exports: Cut flowers, dairy products, flower bulbs, mushrooms, potatoes, sugar beets

Leading agricultural imports:

Animal fats, brewer grains, citrus pulp, corn gluten, cotton, fish oil, raw tobacco, soy beans and products, wheat

Agricultural imports as share of total imports: 17.7%

U.S. share of total agricultural imports: 8.5%

Percent of population in agriculture: 5.8%

result of higher prices for beef and milk. However, the continued high-volume production of pork, poultry meat, and eggs, together with higher production in surrounding countries, resulted in a further drop in prices from the already low 1987 levels.

Dutch farmers compensated for some loss of income during 1988 by cutting costs, particularly for fertilizer. Dairy farmers also managed to reduce their penalty payments for

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ billions¹</i>	
Selected products		
Animal feed	0.88	2.06
Fruits, vegetables	0.23	2.00
Grains and products	0.05	1.94
Meat, incl. poultry	0.07	0.94
Milk and products	0.01	2.77
Oilseeds, products	1.19	2.09
All other	0.52	5.74
Total²	2.94	17.54

¹ Values are shown in U.S. dollars at US\$1=1.9762 guilders. Includes commercial and concessional imports.

² Includes products not listed above.

exceeding the European Community (EC) milk quota.

But even with overall agricultural costs down and production at high levels, critical feed and energy costs increased during 1988, causing financial difficulties for some farmers. Other factors affecting Dutch agriculture in 1989 include weather conditions, the value of the dollar, EC regulations, commodity prices, and petroleum prices.

Farm and food policy

The Netherlands was a founding member of the EC in 1958 and has remained an ardent supporter of European integration. Nonetheless, Dutch farm groups have criticized certain new EC farm price proposals which they believe would hurt farm incomes.

Crop farmers complain about having to cope with yet another price decrease while dairy farmers are concerned that the measures will result in high prices for butter and

dry milk which, in turn, will divert milk for processing away from competitive dairy products such as cheese. Shifting production could then lead to rising butter and milk stocks which would tend to depress prices.

Dairy farmers urge expanded dairy quotas to ensure enough milk to satisfy demand for cheese production. While acknowledging the effectiveness of quotas, many in the dairy industry would like to see a more flexible support system that could take changes in supply and demand more readily into account. Dutch farmers strongly support a move towards allowing trading of milk quotas among EC member farmers. Despite farmer resistance, the Government has supported the EC Commission's 1989 price proposals.

Imports and exports

Dutch foreign trade experienced significant changes in 1988 with a 11-percent increase in the value of agricultural imports and a 6-percent increase in agricultural exports. The major reason for this development was increased Dutch involvement in exports of EC grains and dairy products to non-EC destinations in the Mediterranean and Middle East.

For both EC and non-EC products, the Netherlands continues its historic role as a leading transshipper of agricultural commodities—a position ensured by the Dutch port of Rotterdam, the largest in the world.

For domestic consumption and for value added re-export, the Netherlands' imports include animal fats, brewer grains, citrus pulp, and cotton. Also, the Netherlands traditionally has imported soybeans, soy products, oilseeds, and coarse grains from the United States.

Although the U.S.-Dutch trade balance in agricultural products remained favorable for the United States in 1988, the U.S. market share

in the Netherlands shrunk on both a volume and value basis. Since volume fell more than value, the indication is that the U.S. competitive position may have eroded. The North American drought may have been the main cause, as evidenced by falling imports of U.S. soybeans.

The Netherlands exports about 60 percent of its total agricultural output and places great emphasis upon export expansion as vital to the farm sector, as well as to the overall Dutch economy. Currently, the share of exports to EC destinations is around 78 percent.

Trade policy and prospects

Dutch trade policy can be said to be driven by two primary considerations. First, with its extremely open market and an important position as an exporter, international trader, and financier, the Netherlands is very sensitive to changes in the global economy and energy prices.

Second, trade-producing activities are encouraged but must not conflict with national priorities such as protecting the environment.

Concerns about agricultural prices and farm incomes are normally addressed in the forum provided by the EC. Generally, the Dutch see free trade as working to their advantage. Within EC trade councils, the Dutch Government generally presses for liberalized agricultural trade, sometimes contrary to the positions of other member countries. Nonetheless, the Dutch Government strongly supports the EC ban on the use of hormones in meat production. ●

New Zealand

N

Profile of agriculture

Over half of New Zealand's 269,063 square kilometers—an area about the size of Colorado—is devoted to crop production or livestock grazing. The country produces an abundance of vegetables, fruit, cereals, meat, wool, and dairy products. Commercial timbering occupies 4 percent, or 10,450 square kilometers of land. Agriculture, including off-farm activities, employs 11 percent of the labor force and accounts for one-quarter of the gross national product.

The South Pacific nation's topography is quite diverse with rain forests, alpine mountains, and fertile plains breaking the country into well-defined agricultural zones.

Despite its diverse, regionalized topography, the country as a whole possesses a temperate climate without marked extremes. Most areas experience only a few days of

freezing weather or very hot temperatures annually and rainfall is abundant.

New Zealand is an export-oriented agricultural producer. Its agricultural infrastructure is designed to enhance that position.

Production highlights

Milk, wool, beef, and sheep meat account for 70 percent of New Zealand's agricultural output, excluding forestry.

Sheep numbers were built up during the early 1980's, encouraged by government programs. During 1988, New Zealand's sheep industry was in a decline, a situation brought on by increased costs and lower world prices. Still, sheep will continue to dominate the hillsides as long as wool remains profitable. Although farmers are retaining sheep for wool production, some mixed farms are thinning sheep herds in favor of cattle. This decline in sheep is contributing to slightly lower wool production.

Excess processing capacity exists in the red meat industry with meat companies competing for stock to keep their plants operating. New Zealand also had 618,000 farmed deer in 1988 and the number was growing. Milk production is returning gradually to the level of its most recent peak of 8 million metric tons during 1985/86.

New Zealand's grain production suffered during 1988. Devastated by 2 years of low prices, farmers were then hit by a severe dry spell which ruined the main production area late in the year.

Corn production varies little from year to year and yields have been steady at about 9.5 tons per hectare. A combination of storm damage and smaller plantings, caused partly by a seed shortage in 1988, has created a supply shortage.

Oats have fared better, benefiting from a booming consumer demand for oat-based breakfast



New Zealand at a Glance

Population (1988): 3.26 million

Urban population: 2.2 million

Population growth rate: 0.7%

Per capita income (1988): \$11,065

Arable land area: 209,869 square kilometers

Major crops: Apples, barley, corn, field peas, forest products, kiwifruit, nectarines, oats, pears, wheat

Livestock sector: Beef, dairy, deer, eggs, goats, hogs, poultry, sheep

Leading agricultural exports: Animal oils and fats, apples, beef, dairy products, forest products, kiwifruit, pears, sheep meat, wool

Leading agricultural imports: Citrus fruit, coffee, fertilizer, forest products, grains, sugar

Agricultural imports as share of total imports: 6.8%

U.S. share of total agricultural imports: 10.5%

Percent of population in agriculture: 11.3%

cereals and snack foods. Oat production for horse feed also enjoys steady demand at good prices.

Increased confidence in export markets for peas and lentils translated into more area sown during 1988.

Farm and food policy

The goal of New Zealand's agricultural policy is to allow market forces to determine the most efficient allocation of resources.

Agricultural Production

	1986/87	1987/88
	<i>thous. metric tons</i>	
Crop production ¹		
Barley	402	378
Corn	195	165
Field Peas	106	74
Oats	78	82
Oilseed Rape	18	8
Wheat	336	228

	1987	1988
	<i>millions</i>	
Livestock numbers ²		
Beef cattle	4.80	4.90
Dairy cows	3.20	3.20
Goats	0.70	1.10
Hogs (sows)	0.05	0.05
Sheep	64.20	64.60

¹ Crop years are July-June.

² Estimates as of June 30 each year except for goats, September.

**Value of Agricultural Imports,
July-June 1987/88**

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Beverages	1.98	64.55
Cereal	0.96	35.76
Forest products	2.94	27.82
Fruits and vegetables	18.84	107.20
Oilseeds	2.94	7.94
Sugar	0.96	45.70
Tobacco	5.96	17.88
Total²	56.34	541.28

¹ Values are shown in U.S. dollars at US\$=1.56 New Zealand dollars. Includes commercial and concessional imports.

² Includes products not listed above.

New Zealand is in transition from a tightly controlled economy to an open market economy. Reform of agricultural policy and removal of subsidies are crucial components of the economic program. Assistance to agriculture has been dismantled but not without complaints from producers as most assistance in nonagricultural sectors is being withdrawn at a slower rate.

The Government of New Zealand recently removed itself from involvement in producer board pricing mechanisms which remain in place but no longer include a subsidy. The apple/pear and dairy boards still manipulate prices and the wool board intervenes at wool auctions.

Imports and exports

New Zealand is a net importer of grain and tropical fruits, much of which come from the United States.

New Zealand is also an importer of sugar products.

Economic restructuring, weather problems, and poor international prices combined to limit the export grain sector expansion that began in the early 1980's. Wheat production has dropped sharply and barley exports have almost disappeared. During 1989, the country is expected to become a net grain importer.

New Zealand imports goats from Australia and goat embryos from Zimbabwe to help raise the genetic merit of its flocks. The main export product from New Zealand goats is the fine white Cashmere fiber.

Two-thirds of New Zealand's exports come from agriculture. The country exports wool, beef, lamb, fish, wood pulp, hides, casein, butter, cheese, sawn timber, kiwifruit, apples, pears, and stonefruit.

The dairy industry will earn US\$1.8 million from overseas markets in 1989. The New Zealand Dairy Board continues to develop a wide infrastructure of subsidiaries overseas. It is battling for access to the British butter market, while sales to the Soviet Union have dried up because of European sales.

Wool exports were declining before June 1988. A combination of factors, including early shearing and the sale of some Wool Board stockpile, contributed to increased export volume. China buys the greatest share of New Zealand wool, followed by the United Kingdom.

Exports of fruit are dominated by apples, pears, and kiwifruit. Stonefruits, such as peaches and nectarines, represent a small but growing segment. Despite a decline in kiwifruit prices, the Apple and Pear and Kiwifruit Boards are working to increase producers' returns by more efficient marketing.

Exports of forest products, particularly wood pulp and log exports, increased in value during 1988.

Trade policy and prospects

Most of New Zealand's tariffs are scheduled to be reduced by up to 50 percent by July 1993. In place of protectionism, New Zealand is becoming more aggressive in its marketing. The country has a system of marketing boards serving each of the major agricultural commodities. The boards help eliminate domestic price competition among exporting firms and also protect the country's reputation for quality produce. Improved access in international markets also ranks as a major priority.

New Zealand is an active participant in multilateral trade negotiations such as the General Agreement on Tariffs and Trade (GATT) where it takes a leading role among the Cairns group of 13 exporting nations. The Cairns group is a coalition of agricultural trading countries which are working together to present a common position in the Uruguay Round. Export expansion through enhanced marketing techniques also remains a priority.

The most significant development during 1988 on New Zealand's tariff policy related to the amount of local content in a product required to qualify for tariff protection. A recommendation is being considered to raise the threshold from 25 percent to 50 percent for the proportion of local content a producer would need for tariff protection.

New Zealand is reviewing its policy for agricultural and plant quarantine for the first time in 20 years. Pest inspection is now done at the port of entry but the Government wants to develop offshore protection systems.●

Nigeria

N

Profile of agriculture

Nigeria occupies 923,768 square kilometers on the West coast of Africa—an area about the size of California, Nevada, and Arizona combined. Its terrain ranges from tropical forests to open woodlands, grasslands, and semi-desert.

Among its population of 110 million, literacy and education rates are low, hampering efforts to raise the sophistication of agriculture. Nigerian agriculture is labor intensive, employing 60 percent of the workforce with most agriculture on a subsistence basis.

Nigeria produces cocoa, sugar, palm oil, yams, cassava, sorghum, millet, corn, rice, wheat, livestock, peanuts, fruits and vegetables, tobacco, rubber, and cotton. Root crops provide the largest volume of agricultural production, although Nigerians depend upon grains for about half their caloric intake.

Nigeria is nearly self-sufficient in food production and is likely to become fully self-sufficient on a net basis, even though its efforts to

produce wheat and other temperate climate crops may not be cost effective.

Production highlights

Food availability has not kept pace with population growth over the past decade but production of most crops expanded in 1988 due to increased area planted and good weather.

After the introduction of a wheat import ban in 1987, many bakeries were forced to close down and bread consumption declined sharply. Consumers shifted to other foods, such as root crops, causing prices to skyrocket for bread substitutes. In order to meet demand, some root crops may have been harvested somewhat early, hence lowering production.

Cereal production is increasing. Millet may survive in the most arid cereal regions. The area planted remains constant and no major efforts for varietal improvement have been made. Corn and sorghum tend to compete for the same land in some areas with more rain.

Rice production may be increasing in Nigeria, although smuggled product may still represent over a third of the rice consumed. Production problems include lack of good quality seed, as well as poor harvesting and processing techniques.

Major oilseeds produced in Nigeria include palm kernels, peanuts, and soybeans. Palm oil and palm kernel oil production are increasing. If the demand from Nigerian and soy milk industries expands, Nigeria is likely to become a soy importer again.

Cotton production has been recovering during the last 2 years following the 1985/86 crop which fell to one-tenth of peak production. Raw cotton moves into Nigeria from nearby countries, but official imports have been halted by imposition of a 60-percent duty imposed in August 1987. The textile industry is doing well, and traders are exporting



Nigeria at a Glance

Population (1988): 110 million

Urban population: 30 million

Population growth rate: 3.3%

Per capita income (1988): Under \$300

Arable land area: 300,000 square kilometers

Major crops: Cassava, cocoa, corn, cotton, fruits, millet, palm oil, peanuts, rice, rubber, sorghum, sugar, tobacco, vegetables, wheat, yams

Livestock sector: Beef, dairy, eggs, goats, hogs, poultry, sheep

Leading agricultural exports:

Cocoa, natural rubber, palm kernels

Leading agricultural imports: Dairy products, sugar, tallow

Agricultural imports as share of total imports: 16%

U.S. share of total agricultural imports: 9%

Percent of labor force in agriculture: 60%

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop production		
Cassava	14.00	14.80
Corn	2.00	1.90
Millet	2.95	2.00
Plantain	1.70	1.07
Sorghum	3.60	2.90
Vegetables	1.29	1.24
Yams	15.00	18.20
Wheat	0.02	0.03

	1987	1988
	<i>millions</i>	
Livestock numbers		
Beef/dairy cattle	12.0	12.0
Hogs	1.0	1.3
Poultry	150.0	130.0
Sheep/goats	38.0	37.0

approximately 45 percent of Nigerian textiles to nearby countries. Also, there has been some investment in large-scale cotton and palm production.

Nigerian cocoa production expanded impressively during 1987/88 through better cultivation practices. Production in 1988/89 is expected to fall slightly due to excessive rain during October 1988.

Nigerian meat consumption is relatively low. Cattle, largely raised by nomadic herdsman, are widely

Value of Agricultural Imports, 1987

Selected products	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions</i>	
Dairy	.08	190.3
Malt	57.10	189.8
Sugar	N/A	154.4
Tobacco	9.10	11.2
Total ¹	197.0	1850.0

¹ Includes products not listed above.

spread throughout the country. Most of the cattle are similar to the Zebu breed. There have been numerous attempts to introduce European and U.S. dairy cattle, such as Holsteins, but most of these efforts have failed because of poor disease resistance or tropical management practices.

Goats and sheep provide a portion of the national meat supply and there is a growing, albeit small, production of pigs.

Nigeria had been developing a modern poultry industry, with increasingly scientific feed compounding and small backyard operators being replaced by large commercial farms of 10,000 birds or more. However, a 1984 ban on corn imports caused severe contraction of the industry.

There is no large-scale fruit production in Nigeria, but there has been some experimental planting of citrus groves. Scattered orange, mango, papaya, and other trees produce substantial quantities of fruit for decentralized marketing. Several local firms process orange or mango juice. There is also private investment in pineapple production for air shipment to Europe.

Vegetables are grown throughout the year, mostly on small plots.

During the dry season, swampy or irrigated areas are used.

Rubber plantations cover about 150,000 hectares in southern Nigeria, producing about 60,000 metric tons of rubber during 1988. That amount exceeded the country's domestic industrial utilization by 35,000 tons.

Food processing has seen some minor developments. Local purchasing of raw materials for industry increased. New investment has been announced in certain sectors such as soy milk and baby food, potato chip production, and fruit and vegetable processing.

In spite of growth in some food processing sectors, overall agricultural processing has fared poorly due to import bans, high input costs, and reduced consumer demand.

Food and farm policy

The Government champions private farming and relatively free domestic commerce. A stronger reliance on market incentives is shown in State efforts to raise agricultural productivity and to reduce import demand.

The Government stepped away from direct control over farming in 1986 by abolishing the commodity boards, which attempted to monopolize buying and/or to fix prices for grains, cocoa, palm products, cotton, rubber, and peanuts.

While rejecting the idea of controlling prices directly, the Government recognizes that the current food production system results in wide price fluctuation. One effort at a solution is the building of silos in different parts of the country in order to allow for the storage and timely release of commodity reserves. The Government also has tried to stimulate farm entrepreneurs by making credit and crop insurance available.

Nigeria is making a major effort to boost wheat production, with the central and state Government channeling money to states to encourage private farmers to grow

wheat. Most of Nigeria is too hot to grow wheat efficiently. The areas where it can be grown are in the far north, where irrigated or swamp land is used during the cool, dry season. Local millers, who may not legally obtain wheat through imports, are expected to buy local wheat.

Nigeria conserves foreign exchange by substituting domestic crops for imports and raising prices for domestic production.

Imports and exports

Among the major agricultural commodities imported are: tallow, grain sorghum, and tobacco.

Nigeria's major exports are cocoa, palm kernels, hides, skins, and rubber. It also produces a number of other crops for export, including coffee, peanuts, and cashews.

Trade policy and prospects

Nigeria has implemented a protectionist policy on agricultural trade, with import bans on a wide range of food items, including fruits, vegetables, tubers, corn, rice, wheat, barley, malt, vegetable oil, poultry, and poultry items. Heavy import duties apply to most food items not prohibited by the ban as well as nonfood items such as cotton.

The Government is determined to continue its import bans, hoping that in the long run, stimulus of high prices will create benefits higher than the short-term difficulties of high food and raw material prices.

In spite of the import bans, a large volume of products illegally enter the country.

After much deliberation over rising food prices, the Government, in February 1989, issued a new decree banning the exports of beans, cereals, tubers, and their products. It also prohibited the re-export of imported food items. ●

Norway

Profile of agriculture

Norway is a major agricultural producer in spite of its vast expanses of unproductive land. Its 389,000 square kilometers make it slightly larger than the state of New Mexico but only 8 percent of Norway's land is arable. Of that area, slightly less than 3 percent is in agricultural production. The northern climate benefits from the warm coastal currents of the Gulf Stream which warm the air and make agriculture possible.

The country is rugged, with high plateaus, mountains, and fertile valleys. About 25 percent of the land is forested. Norway has about 100,000 farms and is self-sufficient in fish, meat, poultry, eggs, milk, and fats and oil production. Most farms are family-owned, averaging less than 10 hectares.

Agriculture's contribution to the gross domestic product has remained relatively constant in recent

years and was 1.7 percent in 1988. Despite post-war increases in self-sufficiency—reaching about 55 percent—Norway remains a net importer of agricultural goods.

Animal husbandry dominates agriculture, accounting for 70 percent of total farm income. Livestock production occurs largely in the northern and western areas where cooler weather favors grazing over crop production. Near the southern coast, the Gulf Stream climate permits cultivation of temperate-zone farm products such as grains, deciduous fruits, and a wide variety of vegetables and berries. Crop yields are often among the highest in Western Europe due to large use of commercial fertilizers.

Production highlights

In 1988, grain production in Norway suffered from less-than-ideal growing conditions. For example, less than one-half of the 1988 wheat crop reached milling quality, requiring supplementary imports of wheat from the United States and Canada.

Red meat production during 1988 totaled 73,400 tons, down 1 percent from the year before in response to government policies aimed at bringing about a better balance between supply and demand. However, a surplus of pork and mutton persisted during 1988, mainly due to lower domestic consumption caused by high consumer prices.

Government efforts to curb an increase in milk production succeeded in slowing annual production to 1.8 billion liters, the amount needed to supply the domestic fresh milk market.

Farm and food policy

Many sectors in the Norwegian economy are subsidized to insure success in economic policies. The agricultural sector dominates subsidy planning, receiving 60 percent of total subsidy expenditures.



Norway at a Glance

Population (1988): 4.2 million

Urban population: 2.9 million

Population growth rate: 0.3%

Per capita income (1988): \$21,235

Arable land area: 31,120 square kilometers

Major crops: Forest products, potatoes, rye, silage, wheat

Livestock sector: Beef, mutton, pork, dairy products, poultry, eggs

Leading agricultural exports: Cheese, fats and oils, forest products, hides, skins, furs

Leading agricultural imports: Animal fats and oils, cotton, fruits, grain, oilseeds and products, tobacco, vegetables

Agricultural imports as share of total imports: 6%

U.S. share of total agricultural imports: 9%

Percent of population in agriculture: 5%

Norwegian agricultural policy has traditionally included three objectives: an income target, a production target, and regional policy goals. The income objective operates to put income from efficient farms on a par with incomes from nonfarm industries. There are income incentives based on farms of different sizes in various regions.

The production target is designed to fill domestic requirements for most livestock and dairy products and to expand production of field crops such as grains, vegetables, and

Agricultural Production

1986/87 1987/88
thous. metric tons

Crop production ¹

Berries	18	20
Fruits	20	22
Grains	960	1170
Potatoes	300	31
Root crops	170	14
Vegetables	93	93

1987 1988
millions

Livestock numbers ²

Beef cattle	0.6	0.6
Dairy cows	0.3	0.3
Hogs	0.1	0.1
Poultry	4.0	3.9
Sheep	2.2	2.2

¹ Crop years are July/June.

² Estimates as of July 31 each year except for sheep, June 1.

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Cotton	2.70	2.83
Fruits and veg.	40.78	371.62
Grains and prod.	13.63	129.23
Meat, fresh, frozen	.29	21.24
Oilseeds	30.11	80.80
Tobacco	10.32	25.73
Total²	122.58	1642.4

¹ Values are shown in U.S. dollars at US\$1=6.51 kroner. Includes commercial and concessional imports.

² Includes products not listed above.

fodder which could substitute for imported concentrates.

Norway has a pioneer nutrition policy designed to improve the nutritional level of the population. As a result of voluntary cooperation among producers, consumer diets have increasingly reflected the guidelines of nutritional policy. Consequently, Norway has seen a reduction in major diseases. The high cost of healthy food is offset by the higher wage levels required of Norwegian employers.

Norway also pursues comprehensive national policies designed to encourage regional development. Regional policy objectives encourage farmers to remain in agriculture in disadvantaged areas and expand the use of marginal land.

Although the basic agricultural policy remained unchanged in 1988, there was rising criticism of it and a realization that, whether or not Norway joins the European Community (EC), major policy adjustments will be required.

Norway's agricultural policy of heavy subsidization and protection has been seriously questioned in recent years. The major points of criticism are the large transfers of money to the farm sector and rigid import restrictions, which prohibit consumers from taking advantage of lower world market prices.

Norwegian price policy is negotiated with 2-year agricultural agreements which set product support prices and compensate farmers for changes in production costs caused by inflation.

The Government has had to introduce measures to curb subsidy-induced overproduction. To reduce milk surpluses, for example, Norway imposed a quota system in 1977. Under the current program, full prices are awarded for milk deliveries within the quota. However, only 25 percent of the official price is paid for deliveries above the quota, although many technical adjustments to prices are possible.

Imports and exports

The United States accounts for approximately 10 percent of both Norway's agricultural imports and exports. U.S. raisins, prunes, rice, and peanuts dominate the Norwegian market with market shares ranging up to 100 percent, despite price competition from the EC, Turkey, and Australia. U.S. sugar, meats, and vegetable oils face strong competition from the EC within Norway.

The preserved fruit and vegetable sector relies heavily on imports from the United States and elsewhere. About a third of the raw vegetables and two-thirds of the raw fruit for domestic consumption are imported.

The main suppliers of wheat imported into Norway in 1988 were Canada, Saudi Arabia, the United States, and West Germany. The United States continued to be the main supplier of tobacco and cotton. Imports of soybeans remain at high

levels with the United States a major supplier.

Norway is a major exporter of its timber, pulp, cheese, furs, and fats and oils.

Trade policy and prospects

Norwegian agricultural producers and processors are protected by stiff import tariffs and other restrictions. Foods not produced locally—such as citrus products, dried fruits, rice, and nuts—face low tariffs and easy access into the country. However, seasonal import bans are set on fresh fruits such as apples to protect local producers.

Certain imports are controlled by State monopolies. For example, only the State grain corporation may import grain and grain products, and the state wine monopoly retains the exclusive right to import alcoholic beverages.

Norway is a member of the European Free Trade Association. If it joins the EC, it will need to change its nationally oriented, protectionist trade policies to match those of EC. Norway is one of the richest developed countries and benefits greatly from trade. Exports of all goods and services account for about 45 percent of its gross national product and its shipping fleet is among the largest and most modern in the world. As a result, Norway is recognizing its important stake in promoting a liberal environment for foreign trade.●

Pakistan

Profile of agriculture

Pakistan is a poor country with one of the highest population growth rates in the world—currently 3.1 percent annually. However, it remains a key competitor in world cotton and rice markets and conversely is a major importer of vegetable oils.

Agriculture is the single largest sector of Pakistan's economy, employing half of the labor force and providing about 70 percent of Pakistan's export earnings.

Primary crops are cotton, rice, sugarcane, and wheat. Water buffalo, cattle, sheep, and goats are kept as draft animals by crop farmers and provide milk and meat for farm families. Poultry is emerging as a commercial industry, despite setbacks from serious disease problems.

Agricultural Production

	1987/88	1988/89 ¹
	thous. tons	
Crop production²		
Cotton	1,473	1,445
Rice	3,241	3,060
Milk	12,900	13,706
Sugarcane	20,300	21,000
Wheat	12,020	12,675

	1987/88	1988/89
	million head	
Livestock numbers³		
Buffalo	14.0	14.3
Cattle	17.1	17.2
Goats	33.0	34.2
Poultry	144.5	164.6
Sheep	27.4	28.3

¹ Preliminary.

² Marketing years are Aug.-July for cotton, July-June for milk, Oct.-Sept. for rice and sugarcane, and May-April for wheat.

³ Supplied by the Pakistan Government.

Production highlights

During 1989, the agricultural sector's growth rate of 6.1 percent was below the 6.9-percent target due primarily to floods, but was better than in 1988 when dryness resulted in only 2.1 percent growth.

Improved performance was mainly attributed to good cotton output of 8.5-million Pakistani bales (1.445 million tons) in 1989—second only to the 8.66-million-bale Pakistani crop in 1988—and recovery in wheat production. The 1989 wheat crop hit 12.7 million tons with the 1990 crop forecast to reach 14.3 million tons.

Production of rice suffered due to lack of moisture at the time of nursery transplanting and later in the growing period. Floods during July and September 1988 hurt part of the crop, resulting in a 1989 harvest of 3.06 million tons compared to 3.2 million tons in 1988 and is forecast to reach 3.5 million tons in 1990.

Total production of coarse grains during 1989 increased by 2 percent from the year before. Corn and sorghum production was up slightly from 1988, to 1.15 million and 210,000 tons, respectively, despite dry weather. Production of barley suffered due to low moisture, but 1990 production is expected to recover to 130,000 tons.

Livestock production is increasing, with buffalo, cattle, goat, and sheep numbers all up in 1989 over the year before.

Many fairly large-scale commercial poultry units operate in Pakistan and increased production of poultry and poultry products is helping to increase per capita protein availability. In 1989, production grew by 15 percent to 164.6 million birds.

Farm and food policy

Pakistan's goals for agriculture focus on improving farm productivity by such means as: increasing yields with better quality seeds,



Pakistan at a Glance

Population (1988): 107.5 million

Urban population: 75.9 million

Population growth rate: 3.1%

Per capita income (1989): \$397

Arable land area: 20.55 million hectares

Major crops: Cotton, rice, sugarcane, wheat

Livestock sector: Buffalo, cattle, goats, poultry, sheep

Leading agricultural exports: Cotton, rice

Leading agricultural imports: Edible oil, tea, wheat

Agricultural imports as share of total imports: 20%

U.S. share of total agricultural imports: 42%

Percent of population in agriculture: 49%

more balanced use of fertilizers, and improvements in the agricultural extension system. More attention is being given to the livestock, forestry, and fishery sectors. A target growth rate of 4.7 percent per year has been set for the agricultural sector during the seventh 5-year plan (1988-93).

Key policies are aimed at maintaining the price support system for major crops, increasing private sector participation in cotton and rice exports, systematically reducing the fertilizer subsidy, and improving rural infrastructure.

Pakistan's monetary and credit policy is oriented toward achieving

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Edible oil	220.0	410.7
Tea	—	127.6
Wheat	67.2	105.1
Total²	340.5	844.8

¹ Values are shown in million U.S. dollars at US\$1=17.82 rupees. Includes commercial and concessional imports.

² Includes products not listed above.

stability while assuring adequate credit, especially for the priority sectors of the economy. The level of export financing through commercial banks remains protected to assure adequate funds.

Imports and exports

Preliminary figures for 1989 show that the value of Pakistan's major agricultural imports increased by 40 percent to \$1.18 million. Leading imports included edible oil, pulses, tea, and wheat.

Edible oil imports during 1989 totaled 860,000 tons, down from the 1988 record high of 958,000 tons. Palm oil imports have remained fairly constant in the last 3 years while soybean oil imports, almost exclusively of U.S. origin, jumped from 249,000 tons in 1987 to 500,000 tons in 1988. While they slipped to 386,000 tons in 1989, increases are expected in 1990.

Tea imports, valued at \$154.4 million in 1989, came mainly from Sri Lanka, Indonesia, and Kenya.

Flooding in September 1988 swept away some of Pakistan's

wheat carryover and contributed to its return to the world market after a 3-year absence. The United States supplied over four-fifths of the 1989 import total of 1.83 million tons. Pakistan will again import wheat in 1990 to supplement its domestic crop and build stocks.

The value of major agricultural imports from the United States during 1988 increased to \$340 million, more than double the 1987 level. With continued strong imports of soybean oil and wheat, the value of agricultural imports from the United States is projected to exceed \$500 million in 1989. Other significant U.S. agricultural exports include poultry breeding stock, tallow, and vegetable seeds.

In fiscal year (July-June) 1989, the value of Pakistan's major agricultural exports rose to a record \$1.65 million, compared to \$1.42 million the previous year. The value of cotton exports jumped over 50 percent to a record 858,754 tons. On the other hand, rice exports declined by 29 percent to 854,194 tons. Floods swept away part of the 1988 rice crop and less government-held rice is available for export. During 1990, cotton exports are expected to be held back in favor of yarn exports while rice exports are expected to recover. Besides cotton and rice, which earned about \$1.2 million in foreign exchange during 1989, Pakistan's other major agricultural exports include fish and fish products, guar (a drought-tolerant legume), leather, and molasses.

While still positive, Pakistan's net agricultural trade balance deteriorated in 1989 to a little over \$500 million due primarily to increased wheat and pulse imports.

Pakistan's agricultural exports to the United States total around \$10 million annually and include such products as dates, goat hair, pistachios, and rice.

Trade policy and prospects

The main objectives of Pakistan's 1990 trade policies are to increase export earnings, improve the quality and competitiveness of exports, and diversify products and markets. Import duties and taxes have been reduced for refrigerated transport equipment and textile equipment in an effort to boost value-added exports.

The Government restricts imports of many agricultural commodities in order to protect domestic production from foreign competition, save scarce foreign exchange, and protect the public from imports such as pork and liquor that are offensive to Muslims.

Restrictions take the form of prohibitive import duties or bans on imports except those purchased through Government agencies or semi-Government trading corporations.

Growth potential for U.S. feed ingredients has been boosted by the removal of corn from the restricted import list and the acceleration of soybean meal imports. Other areas of growth potential include dry peas, poultry breeding stock, and tallow.

Pakistan currently has barter agreements with 10 countries or companies from Bulgaria, China, Czechoslovakia, Finland, Hungary, Poland, Romania, Sweden, the Soviet Union, and Yugoslavia. Trade under these agreements covers a whole spectrum of products. Imports of agricultural commodities such as wheat and vegetable oil have recently increased. Items exported include raw cotton, cotton textiles, fruits and vegetables, leather products, molasses, rice, and many other items. An effort is being made to reduce cotton and other raw material exports in favor of value-added items. ●

Paraguay

Profile of agriculture

Agriculture, including livestock and fishing, is the mainstay of the Paraguayan economy. Agriculture has experienced moderate growth in recent years due to Paraguay's fertile soils and a favorable climate. The lack of an efficient transportation system is the major problem preventing more rapid development.

Landlocked in the heart of South America, Paraguay is surrounded by Argentina, Brazil, and Bolivia. Its access to the Atlantic Ocean is by way of the Parana-Paraguay River system that flows south through Argentina to the Rio de la Plata or overland by highway through Brazil.

Agriculture accounted for over 25 percent of the gross domestic product in 1988, made up almost 90 percent of Paraguay's total exports, and employed half of the workforce.

Major crops are soybeans, cotton, wheat, manioc, tobacco, corn, rice, and sugarcane. The livestock industry contributed almost 8 percent of the gross domestic product in 1988. The country is self-sufficient in most foods.

Production highlights

Good weather and strong prices for cotton and soybeans coupled with greatly expanded planted areas contributed to a more than 9-percent increase in agricultural production in 1988 and a 30-percent growth in exports.

Paraguay is highly dependent on the performance of two crops, cotton and soybeans, which together account for almost 75 percent of total exports. Good weather in late 1987 and early credit commitments from the Government encouraged large plantings of cotton and soybeans. The 1988 soybean crop set a new production record at 1.1 million tons, 16 percent above 1987.

Cotton production achieved a new record in 1989, totaling over 213,000 tons, and was a major factor contributing to the good performance of agriculture in 1988.

Total Paraguayan grain production for 1988 was estimated to be 10 percent higher than 1987 for a total yield of 1.4 million tons. Corn and wheat showed increases. Other grain crops produced in Paraguay are rice, sorghum, and oats.

Sugarcane in Paraguay is used for the production of sugar, fuel alcohol, and "cana," an alcoholic beverage. Sugarcane production for 1988 dropped slightly to 3 million tons compared to 1987 production of 3.2 million tons.



Paraguay at a Glance

Population (1988): 4.4 million

Population growth rate: 3%

Arable land area: 79,460 square kilometers

Major crops: Corn, coffee, cotton, oilseeds, rice, soybeans, tobacco, rice

Livestock sector: Beef cattle

Leading agricultural exports: Beef, cotton, oilseeds, soybeans, tobacco

Leading agricultural imports: Processed fruits and vegetables, livestock genetics

Percent of population in agriculture: 44%

Oilseed production rose for 1988, continuing an upward trend in production levels, particularly for soybeans and cottonseed. The outlook for 1989 is for soybean production to increase to a new record-high of 1.2 million tons, based on an expanded planting area. In 1988, soybean production totaled 1.1 million tons compared to 950,000 tons in 1987.

Cottonseed production totaled 354,000 tons in 1988, representing almost a two-fold increase in production over 1987.

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Corn	608	1,000
Cotton	84	175
Soybeans	950	1,100
Sugarcane	3.2	3.0
Tobacco	12	7

	1988
	<i>millions</i>
Livestock numbers ¹	
Beef cattle	8.0
Dairy cows	0.6
Hogs	1.5

¹ Based on latest livestock survey.

Coffee production for the 1988/89 year is estimated at 24,600 tons or 410,000 60-kilogram bags, an increase of 60,000 bags over 1987/88.

Tobacco is grown on small plots by numerous subsistence farmers. Important markets such as France are purchasing less Paraguayan tobacco and tobacco production is leveling off to support the domestic market. Production for 1988 was estimated at 9,500 tons compared to 12,000 tons in 1987.

The livestock industry, an important part of the economy, had a difficult year in 1988. Heavy flooding of the Paraguay River in April, a freeze in July, and an extended drought in October aggravated the cattle feed situation and damaged pastures.

In addition, beef exports suffered a setback due to the European Community's decision not to purchase Paraguayan beef because of the growth hormone issue.

Farm and food policy

The Government has attempted to ameliorate rural poverty with a land program, which has offered new land to more than one-sixth of the nation's small farmers.

Imports and exports

Paraguay imported \$3.4 million of agricultural products from the United States in 1988, including processed fruits and vegetables and livestock genetics.

Paraguay exported \$15.7 million of agricultural products to the United States in 1988. Principal exports from Paraguay to the United States included sugar, coffee, and essential oils.

Agriculture accounts for over 90 percent of Paraguayan exports. Exports increased from \$397 million in 1987 to a record \$506 million in 1988, an increase of 20 percent. The three most important export commodities are soybeans, cotton, and beef.

Beef exports fluctuated between the third and fourth greatest foreign exchange earner but fell significantly from the 1986 record of 48,000 tons. Beef export sales for 1988 were estimated at 16,000 tons, down from 1987 sales of 18,000 tons.

Paraguay exports beef to its Southern cone neighbors like Brazil, Chile, and Peru. Egypt and Saudi Arabia are also principal buyers.

Exports of soybeans for 1988, buoyed by unofficial imports of approximately 400,000 tons from Brazil, totaled 1.28 million tons of soybeans and 68,000 tons of soybean meal.

Cotton exports for 1988 totaled 150,000 tons valued at \$187 million.

Cotton was the second leading foreign exchange earner after soybeans. Brazil was the leading buyer of Paraguayan cotton, purchasing approximately 80,000 tons.

Trade policy and prospects

Export policies affecting Paraguayan trade were significantly changed in 1989 by the new Government, which replaced a floating free market exchange rate and also reduced export taxes. Free market exchange rates will allow exporters to become more competitive and retain a larger share of the profits. This, in turn, will allow them to pay higher prices to the producers.

These changes were approved by the private business sector, which criticized previous economic policies as being discriminatory, hampering trade, and abetting contraband.

The goal of lower export taxes is to motivate agricultural producers to market more farm products overseas. Beef exports will be assessed a tax of 4 percent of value, compared to previous taxes of \$160-380 per ton.

The export tax for soybeans has been set at 5 percent and for soybean products at 4 percent.

With a unified floating exchange rate for all private and public transactions and the new system of export taxes, the Government hopes to keep tax rates low, ensure that there is no disincentive for exporters to comply with the new tax code, and reduce the incentive for contraband trade. ●

Peru

Profile of agriculture

Peru is the third largest country in South America. Agriculture provides 12 percent of the gross domestic product and employs 38 percent of the population.

Large-scale, cooperatively-owned farms located on the coast produce cotton, rice, and sugarcane, as well as fruit and vegetables for domestic and export sales. Most farmers, however, continue to work small subsistence plots in the highlands, where they grow potatoes, corn, and fodder for their small herds.

Peru's socioeconomic structure is based largely on the geographic division between the coast with its productive irrigation-based agriculture, the sierra with its impoverished Indian population, and the jungle with its remote expanses of undeveloped land.

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop Production		
Barley	114	128
Coffee	73	78
Cotton	72	112
Corn	909	880
Dried beans	56	60
Potatoes	1,650	1,900
Rice, milled	680	653
Sorghum	24	30
Sugar, raw	580	574
Wheat	131	140

	1987	1988
	<i>thous. metric tons</i>	
Animal Products		
Beef	107	100
Eggs	80	84
Milk	673	684
Mutton	19	20
Pork	65	70
Poultry meat	256	250

Peru produces rice, corn, potatoes, cotton, cocoa, coffee, sugarcane, and meat and dairy products. Wheat, corn, rice, dairy products, vegetable oil, meat, and sometimes sugar are imported. Peru exports fishmeal and fish oil, canned and frozen fish, coffee, and cotton.

Production highlights

Total grain output is expected to drop in 1989. A severe shortage of water in late 1988 delayed planting of much of the rice crop. Rice production is expected to fall 10 percent in 1989 as compared to 1988. Water levels returned to normal after heavy rains in early 1989, and a second crop of corn should return corn output to normal levels in 1989.

Good weather in 1987/88 produced a cotton crop with yields well above the 1986/87 crop. Because of the excellent cash return for exporting cotton, farmers expanded the 1988/89 cotton area by 30 percent, at the expense of rice and potato plantings. Abundant rainfall in 1988 in most coffee-producing areas boosted coffee yields. Production in 1989 is also expected to be somewhat higher. The Government encourages increased acreage for coffee because it is an important export crop.

Peru's 1988 sugar production totaled 574,469 tons raw value, 1 percent below 1987. Higher production of sugarcane in 1989 depends upon the supply of irrigation water, fertilizers, and credit in the sugar-producing areas.

Before 1982, Peru was one of the world's largest fish producers, but the climatic effects associated with the "El Nino" ocean current killed schools of fish and forced others offshore into deeper water. Overfishing has also had negative effects in some years, but the sector recovered and during 1988 the total catch for production of fishmeal and fish oil was up 38 percent. The same level of production is forecast for 1989.



Peru at a Glance

Population (1988): 21.3 million

Urban Population: 14 million

Population growth rate: 2.6%

Per capita income (1988): \$977

Major crops: Corn, rice, coffee, sugar and molasses, cotton, potatoes

Livestock sector: Poultry, beef and dairy cattle, sheep

Leading agricultural exports: Sugar, coffee, cotton, raw wool

Leading agricultural imports: Wheat, corn, rice, barley and malt, oilseeds, meat, sugar, and dairy products

Agricultural imports as share of total imports: 17%

U.S. share of total agricultural imports: 25%

Percent of population in agriculture: 38%

Farm and food policy

The Government's high priority on raising agricultural production is considered critical for the country's future, but inefficiency and low yields continue to hamper advancement.

Government agricultural price supports and food subsidies during the past several years have created large government budget deficits and extremely high inflation, which reached 1,722 percent in 1988. As a result, prices for many Peruvian foods rose dramatically and consumer demand for many products dropped sharply.

Value of Agricultural Imports, 1988

Selected Products	Imports from	
	United States	All suppliers
	\$ millions ¹	
Corn	30.6	54.7
Rice	5.0	5.0
Soybeans	4.7	4.7
Wheat	56.8	114.6
Total²	156.0	504.0

¹ Values are shown in U.S. dollars at US\$1 = 147 Peruvian inti. Includes commercial and concessional imports.

² Includes products not listed above.

The Government, although still maintaining tight controls over food marketing and distribution, has adopted a new policy to stabilize the economy by gradually reducing and liberalizing price controls and lowering food subsidies.

Most of the subsidies during 1989 are planned to help producers and encourage greater domestic agricultural output, rather than help consumers.

To further encourage greater use of domestically produced grains and native crops, including potatoes, wheat mills are required to use a minimum percentage of domestic grains and crops in order to be eligible for imported wheat supplies. This proportion was set at 10 percent for 1988 and increases gradually to 70 percent in 1997.

The Government is encouraging increased coffee production because it is an important export crop and can provide Peru with additional foreign exchange. However, terrorist activity is beginning to cause problems in the main coffee-producing area, and production could be affected over the next few years.

Imports and exports

Agricultural imports totaled \$504 million in 1988, down from the year before primarily because of foreign exchange constraints.

The U.S. market share for Peruvian agricultural imports, which rose in 1988 to 31 percent, should continue steady in 1989, but total sales are expected to decline in line with lower Peruvian imports. While the U.S. share is relatively strong for wheat, credit availability from other South American countries has hurt the U.S. share of corn and soybean meal.

The already reduced demand for corn, wheat, and milled rice is expected to continue in 1989 due to the severe economic situation and a decline in consumer purchasing power.

Consequently, total imports of corn are expected to drop from 612,000 tons in 1988 to only 200,000 tons in 1989, and wheat from 916,000 tons to 800,000 tons.

The U.S. share of wheat imports has improved significantly, due to limited availability of wheat from Canada and Argentina.

In the case of rice, imports are estimated to increase to 150,000 tons, up substantially from just 17,000 tons in 1988 because of domestic demand. Rice is a staple of the Peruvian diet. Peru buys rice primarily from North Korea, Thailand, and the United States.

Peru imported 207,301 tons of white sugar in 1988, down 35 percent from 1987. Since domestic consumption is down, only 150,000 tons of sugar is expected to be imported in 1989.

Peru's agricultural exports in 1988 were estimated at \$167 million, with coffee, cotton, fishmeal, and sugar the leading sellers. Coffee maintained its leadership as the No. 1 export earner in 1988, worth \$121 million.

However, compared with the 1987 coffee export figure of \$143 million, exports were down due to

reduced coffee exports to countries which are not members of the International Coffee Organization.

The large cotton crop in 1989 along with reduced domestic demand will provide more cotton for export. Exports of raw cotton totaled \$27 million in 1988, a big gain compared with \$19 million in 1987.

Fishmeal exports, which were up 9 percent in 1988, are again expected to increase during 1989 due to favorable sea conditions for fishing and a better exchange rate for exporters. According to trade sources, Peru could export 150,000 tons of fish oil during 1989, since 74,416 tons were exported to Europe from January to March 1989.

Trade policy and prospects

Food imports will continue to receive a high priority for available foreign exchange. Credit is extremely difficult for Peru to obtain to cover these purchases due to the existing economic situation.

The Government imposes strict import licensing requirements. Most agricultural commodities may be imported only by state buying agencies. However, in 1988 the Government officially recognized the parallel dollar market which allows importers to buy dollars on the open market to finance imports.

The Government also established an import license system that permits imports without the use of official foreign exchange reserves. Nevertheless, imports are expected to decline substantially in 1989 due to reduced demand. The Government plans to encourage exports by raising exchange rates, with the goal of eventually allowing exporters to receive open market rates. ●

Philippines

Profile of agriculture

Agriculture is a critical component of the Philippine economy in terms of production value, employment, foreign trade, and consumer spending. Agriculture contributed nearly one-third of gross domestic product (GDP) in 1988 and directly employed over 11 million people, 49 percent of the labor force.

The latest agricultural census (1980) counted 3.42 million farms, of which 96 percent were less than 25 acres.

Crops account for about 70 percent of total agricultural production in the Philippines, with dairy, livestock, and poultry making up the rest.

The Philippine economy posted a 6.7-percent growth rate in 1989, while growth in the agricultural

sector was 3.4 percent. The agricultural sector's growth rate is expected to average between 3 and 4 percent at least until 1990.

Reasons for the growth of agriculture in 1988 were higher commodity prices, production increases for rice and corn (the country's major grain crops), strong growth in livestock and poultry output, and continued growth in farm-grown prawn production.

During the 1980's, agricultural production in the Philippines has strained to keep up with a rapidly growing population. Droughts in 1983 and 1987, and typhoons during other years, hurt the sector.

The Filipino people spent an average of 56 percent of their income on food in 1988. Tobacco and beverages accounted for another 5 percent of their income.

Agriculture in the Philippines is largely dependent on the monsoon rains which normally begin in June.

Production highlights

Rice is the main crop in the Philippines, contributing 26 percent of the value of total crop production. Production of rice in 1989 was projected to reach near-record levels of about 6 million tons, 5 percent above the 1988 level. However, rice yields will have to rise steadily to keep up with expected population growth in the Philippines.

Swine dominates the dairy, livestock, and poultry sector with a 40-percent share. Chicken accounts for 34 percent of the value of this sector, and eggs and cattle each contribute a 9-percent share. Ducks and goats make up the rest. The Philippines has virtually no dairy industry.

Pork and poultry meat production has been rising steadily over the past 5 years. Pork production for 1989 was projected at 575,000 tons



The Philippines at a Glance

Population (1988): 58.8 million

Urban population: 22 million

Population growth rate: 2.5%

Per capita income (1988): \$652

Arable land area: 77,524 square kilometers

Major crops: Rice, corn, coconut, sugarcane, bananas, pineapple, coffee, mango, tobacco

Livestock sector: Swine, poultry, shrimp, prawns

Leading agricultural exports: Coconut oil, bananas, pineapple products, sugar, coffee

Leading agricultural imports: Dairy products, wheat, soybean meal, tobacco, raw cotton

Agricultural imports as share of total imports: 11%

U.S. share of total agricultural imports: 36.9%

Percent of population in agriculture: 49%

and poultry meat production at 255,000 tons.

While the Philippines boasts a large domestic swine industry, private "backyard" operations accounted for 83 percent of total swine population in 1988. Commercial production accounted for the balance.

Farm-grown shrimp and prawn production is the fastest growing agricultural industry in the Philip-

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Bananas	3.78	3.64
Coconut	2.50	1.90
Corn	4.23	4.40
Citrus fruit	.14	.14
Mangoes	.35	.29
Pineapple	1.67	1.65
Rice	8.53	8.80
Rootcrops	2.82	2.94
Sugarcane	14.40	13.25
Tobacco	.08	.08

	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Cattle	4.62	4.42
Hogs	7.11	7.65
Poultry	58.07	66.34
Sheep	1.20	2.12

¹ Estimates as of January 1 of each year.

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Dairy products	7.0	152.9
Feedstuffs	31.4	172.1
Fibers	37.7	71.5
Grains and products	173.6	219.9
Tobacco	32.9	81.6
Total²	334.0	906.3

¹ Values are shown in U.S. dollars at US\$1=20.60 pesos. Includes commercial and concessional imports.

² Total includes products not listed above.

piners. In 1988, production was 33,000 tons, nearly 40 percent above 1987 levels. About 20,000 acres of Philippine farmland is devoted to shrimp and prawn production, with an estimated 375 acres being developed and added to the industry monthly.

In 1988, the lingering effects of a drought in 1987 lowered the production of coconut, pineapple, and bananas, the Philippines's major export crops. Sugar production also declined in 1988, continuing a 5-year slide. Sugar production is expected to improve with better weather and prices.

Other primary Philippine crops expected to see growth through 1990 are corn and coconut.

Farm and food policy

The Government is trying to increase agricultural production by encouraging diversification of export crops, improving incomes in rural

areas, strengthening conservation policies, expanding land reform, and improving coordination between the country's infrastructure and institutions.

In June 1988, the Philippine congress passed the Comprehensive Agrarian Reform Law of 1988, which is the foundation for the Comprehensive Agrarian Reform Program (CARP). CARP is a 10-year program that is seeking to equitably distribute agricultural lands in the country and to recognize farmers' rights to directly or collectively own the land they work.

Rice and corn will continue to be important crops in the Philippines, but future planting of crops will be left more to the initiative of the growers in keeping with the Government's decentralizing activities.

To aid in agricultural growth, the Government has focused on expanding and improving irrigation systems, agricultural research and land reform. The Government also is encouraging the development of the country's food processing industry for meat, poultry, vegetables, and fruit.

Although formal lending to the agricultural sector improved in 1987 and 1988, agricultural financing continues to be a problem.

Farmers frequently are unable to tap formal sources for production loans, equipment needs, or for construction of storage facilities. As many as two-thirds of all Filipino farmers borrow from informal lenders, at rates significantly higher than formal market rates.

Imports and exports

Agricultural trade in 1988 accounted for 14 percent of total merchandise trade. Agricultural imports were 11 percent of total imports and agricultural exports were 18 percent of all exports.

The Philippines had a net agricultural trade surplus of \$334 million in 1988.

Philippine agricultural exports rose 6 percent while agricultural imports increased 36 percent in 1988. Major exports were coconut oil, fresh bananas, pineapple products, sugar, and coffee. Major imports included dairy products, wheat, soybean meal, tobacco, and raw cotton.

Agricultural trade with the United States increased in 1988. U.S. agricultural exports to the Philippines rose from \$219 million in 1987 to \$334 million in 1988, a 53-percent increase, due mostly to increased wheat shipments and the first imports of U.S. rice since 1985. Principal U.S. exports were wheat, tobacco, soybean meal, rice, and raw cotton.

In 1988, the United States supplied 37 percent of all Philippine agricultural imports and accounted for 35 percent of all agricultural exports.

Philippine agricultural exports to the United States in 1988 were valued at \$428 million, which was 14 percent higher than 1987 levels. This rise was due to increased shipments of coconut oil and sugar.

Trade policy and prospects

The Government's ongoing program to liberalize imports has significantly lowered barriers to imports of many high-value food items. Imports of several major agricultural items (notably rice, corn, and sugar), however, still are restricted. Tariffs on high-value food imports are high, typically 50 percent ad valorem. ●

Poland

Profile of agriculture

Poland's agricultural sector employs more than one-fourth of the country's labor force and accounts for about 13 percent of national income. The sector is dominated by private farms.

These private farms—numbering nearly 3 million—supply about 75 percent of Poland's agricultural production. The remaining 25 percent comes from 5,000 socialized farms. Most private farms are small units, averaging around 5 hectares

and producing both crops and livestock.

Principal grain crops are rye, wheat, barley, and oats, which occupy about 57 percent of the agricultural land area. Potatoes, hay, and silage take 30 percent of the farmland. Other important crops are rapeseed, sugar beets, pulses, and fruits and vegetables.

Hogs lead in livestock numbers, followed by cattle, sheep, and horses. Poultry production is also important, providing about 12 percent of meat output.

The farm sector is chronically unable to meet national demand for wheat, feed grains, vegetable oils, protein meals, meat, butter, and cheese. Nevertheless, Poland is Eastern Europe's leading producer of potatoes, rapeseed, sugar beets, grains, hogs, and cattle.

Livestock herds have been expanded to satisfy the growing demand for meat, but production is limited by feed shortages. A short growing season, poor soils, shortages of commercial fertilizers and pesticides, and the small size of private farms are major obstacles to increased feed grain production.

Agricultural progress overall is impeded by low levels of efficiency in the state agricultural sector, unstable farming profitability, and a general lack of incentives. Soaring input prices and the inflexibility of official prices for farm products have contributed to the uncertain profit picture facing farmers.

Until recent years, a relatively large percentage of the population worked in agriculture, partly compensating for the lack of machinery and modern inputs. However, the labor surplus is shrinking as more people migrate to industrialized urban areas.

Production highlights

Agricultural production rose 0.6 percent in 1988 and was 3.3 percent above the 1983-87 average. The small improvement occurred despite



Poland at a Glance

Population (1988): 37.8 million

Urban population: 23.1 million

Population growth rate: 0.8%

Per capita income (1987): \$1,121

Arable land area: 144,705 square kilometers

Major crops: Rye, wheat, barley, oats, potatoes, hay, rapeseed, sugar beets

Livestock sector: Hogs, dairy and beef cattle, sheep, poultry, horses

Leading agricultural exports: Meats, including canned ham and pork shoulders, slaughter cattle and horses, fruit

Leading agricultural imports:

Wheat, protein feeds, cattle hides, meat, cotton, coffee beans, tea

Agricultural imports as share of total imports: 8-13%

U.S. share of total agricultural imports: Varies from 1-10%

Percent of population in agriculture: 28%

a long spring drought, limited input supplies, unstable farm sector profitability, and continued marketing problems. Compared with 1987, crop production was down 0.7 percent, while livestock production was up 2.3 percent.

Poland's grain output, hurt by dry weather, dropped 6 percent from 1987's record high. Potato production was down 4 percent mainly because of dwindling acreage. No major changes were recorded in the rapeseed, sugar beet, and vegetable crops, but deciduous fruit produc-

Agricultural Production

	1987	1988
	mil. metric tons	
Crop production		
Barley	4.3	3.8
Hay	15.4	14.8
Oats	2.5	2.2
Oilseeds	1.2	1.2
Potatoes	36.3	34.7
Rye	6.8	5.5
Sugar beets	14.0	14.1
Triticale	1.0	1.7
Wheat	7.9	7.6

	1987	1988
	millions	
Livestock numbers ¹		
Cattle		
Cows	4.8	4.7
Other	5.4	5.4
Hogs		
Piglets	11.9	12.2
Porkers	5.5	6.0
Sows	1.9	1.9
Horses	1.1	1.1
Poultry		
Broilers	N/A	N/A
Layers	51.7	54.2
Sheep	4.1	4.1

¹ Estimates as of December each year.

N/A = Not available.

Value of Agricultural Imports, 1988

Selected products	Imports from	
	United States	All suppliers
	\$ millions ¹	
Cattle hides	3.0	77.6
Coffee and tea	0	144.3
Cotton	11.3	181.7
Feed grains	21.2	39.6
Meat	0	49.4
Oilcake and meal	0	353.1
Vegetable fats, edible	0	77.9
Wheat	90.1	208.8
Wool	0	102.3
Total ²	130.8	1,882.2

¹ Values are shown in U.S. dollars at US\$1=432 zlotys. Includes commercial and concessional imports. U.S. imports are from U.S. Census data; total imports are from official Polish statistics.

² Includes products not listed above.

tion was about triple 1987's unusually poor harvest.

Livestock benefited from ample feed supplies, a result of the record 1987 grain harvest and large feed-stuff imports. Milk procurement was up 2.6 percent, more than offsetting a 0.6-percent decline in meat deliveries. This made for a relatively stable market, even though significant imports of meat, butter, and cheese were necessary.

The annual plan for 1989 calls for a 2.8-percent increase in agricultural production. In 1988, deliveries from private farms increased 2.3 percent, while deliveries from socialized farms dropped 2.5 percent.

Farm and food policy

Dairy products are the primary source of animal protein in the

Polish diet. Meat rationing continued in urban areas in 1988.

The Government tries to maintain domestic meat supplies, but high-quality meats are reserved first for export because of the need for hard currency. Meat supplies appear to have tightened further in 1989 as a result of high world grain prices and Poland's smaller 1988 harvests of grains and potatoes for feed.

When wide-ranging economic failures led to a shakeup in the national leadership in the fall of 1988, the new Government pledged to give priority to progress in agriculture, the food industry, and a few other areas. Goals emphasized were increased profitability, limits on monopolies in the inputs and food industries, freer markets for buyers and sellers, and easier terms for farmers regarding insurance, land sales, and inheritance.

The first significant steps were taken at the beginning of 1989. The monopoly rights of several Government companies to purchase and process farm foods were abolished. Private businesses were given equal rights to buy most agricultural products directly from farmers, process these products, and put them on the market.

High food subsidies continue, but the Government and Solidarity jointly agreed on the ultimate goal of a decentralized, free market for agriculture.

Imports and exports

Less than 10 percent of Poland's foreign trade is agricultural. Principal imports are wheat, protein feeds, and meat. Major agricultural exports are livestock, livestock products, and fruit.

Protein meal imports were reduced in 1988, and grain imports slackened in the second half of the year (ending the year 0.2 percent above 1987's grain imports). In its 1987/88 marketing year, Poland imported a significant amount of wheat, barley, and sorghum from the

United States under the Export Enhancement Program (EEP). In 1988/89, even with EEP bonuses, U.S. prices were not competitive with those of the European Community, so U.S. sales were negligible.

Poland's 1988 exports of slaughter sheep and cattle increased, sales of meat products—particularly canned ham and pork shoulders to the U.S. market—remained strong, and significant gains were recorded for fresh and processed fruits and vegetables.

Trade policy and prospects

Large grain imports would appear to be necessary if Poland is to maintain livestock production and exports. Actual imports, however, will probably depend on the prices and credit terms available—and on Poland's ability to expand its exports to hard-currency markets. Trade with the West has been growing at a much faster rate than trade with the rest of Eastern Europe or the Soviet Union.

Poland remains burdened with a large debt obligation and a repayment program that absorbs a growing percentage of its hard-currency export earnings. Hard-currency shortages have been made worse by high world market prices, further limiting essential imports.

Although recent changes in Poland's economic and agricultural policies are unlikely to result in any dramatic short-term progress, these new policies may contribute to livelier trade and a brighter outlook for Polish agriculture.

The emphasis on increasing export trade volume—and expanding sales of high-value farm products—probably means greater imports of agricultural inputs. Frequent shortages are reported for fungicides, herbicides, spraying equipment, and other farm machinery. Trade sources also see continued opportunities for joint Polish-American ventures in various lines of agricultural and food production. ●

Portugal

Profile of agriculture

Since 1960, the proportion of the labor force engaged in agriculture in Portugal has dropped from 42 percent to 23 percent. Agricultural production contributes 8 percent of the country's gross domestic product (GDP).

Compared with other European countries, Portugal's agricultural sector is markedly underdeveloped. Major constraints include a small agricultural land base with half the land consisting of poor soils, low capitalization, inadequate use of fertilizers and irrigation, and outmoded farming practices.

Portugal's major agricultural crops are grains, potatoes, olives, wine grapes, rice, citrus fruits, and almonds. However, yields of all major food crops in Portugal are among the lowest in Western Europe.

Agricultural Production

	1987	1988
	thou	metric tons
Crop production		
Almonds, shelled	3.6	1.4
Corn	620	643
Oats	155	76
Olives	51	25
Oranges	97	96
Potatoes	980	749
Rice, rough	145	151
Tomatoes,		
for processing	427	450
Wheat	534	435

	1987	1988
		millions
Livestock numbers		
Beef cattle	875	930
Dairy cows	382	402
Sheep	3,118	3,180
Swine	2,454	2,455

Production highlights

Adverse weather in 1988 caused extensive damage to nearly all crops, with the exceptions of rice (basically steady), corn (up 4 percent), and sunflowerseed (up 13 percent).

Production of tomatoes for processing was also up because of a huge expansion in planted area. However, less than two-thirds of the planted area could be harvested due to rains.

Combined output of winter grains was down by almost 30 percent, with output of barley and oats dropping to about half of the 1987 levels. Wheat production declined 19 percent, and a larger-than-usual share of the wheat crop was good only for feed.

The almond and olive crops were about half of the previous year's level. Potatoes, fruits, and wine grapes also registered production losses.

In the livestock sector, a cost-price squeeze reduced cattle inventories at the end of 1988. Hog inventories increased due to a slowdown in slaughter in the first half of the year and a lower incidence of African Swine fever.

In spite of a 2-percent increase, milk output continued to fall short of domestic needs and imports from the rest of the European Community (EC) were necessary in late 1988.

Production and consumption of poultry meat increased by a relatively modest 3 percent, after a large gain in 1987. Egg output also increased, although an egg shortage developed in the second half of 1988.

If good weather conditions continue, production of most crops should rebound in 1989, with wheat and corn showing the largest increases due to an expanded planted area and slowly improving yields.

No major changes are expected in the 1989 performance of dairy, livestock, and poultry sectors, with



Portugal at a Glance

Population (1988): 9.79 million

Urban population: 3.1 million

Population growth rate: 1.6%

Per capita income (1988): \$2,970

Arable land area: 29,465 square kilometers

Major crops: Grains, potatoes, olives, wine grapes, rice, citrus fruits, almonds

Livestock sector: Cattle, hogs, sheep

Leading agricultural exports: Wine, cork, tomato paste, forest products

Leading agricultural imports: Raw cotton, hides and skins, corn gluten feed, corn, soybeans, sugar

Agricultural imports as share of total imports: 12.5%

U.S. share of total agricultural imports: 18%

Percent of population in agriculture: 23%

output generally continuing to increase at a moderate pace.

Farm and food policy

The Government's policy has been to increase self-sufficiency and develop the country's comparative advantage in wines, fruits, vegetables, wood products, and cork.

Before Portugal joined the EC in 1986, the Government operated a complex system of support prices and costly subsidies that had little effect on output. Since accession, Portugal's policy goals and agricultural programs have been aligned with those of the EC.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected		
Corn gluten feed	109.5	109.7
Cotton, raw	22.2	306.3
Hides and skins	8.6	307.2
Soybeans	99.9	245.0
Sugar	0.0	121.5
Total²	357.2	2,000.0

¹ Includes transshipments. Values are shown in U.S. dollars at US\$1=143.95 escudos

² Includes products not listed above.

The process of adjusting to EC regulations, prices, and customs duties began immediately upon accession. However, full integration into the EC's price and marketing systems will not be completed until the 10-year transition period ends in 1995, and alignment of grain prices will not occur before the year 2000.

During the transition period, structural improvements are expected to raise Portugal's low level of productivity closer to EC levels.

Imports and exports

Total imports of farm goods in 1988 were up by 17 percent over the same period in 1987. Cotton and hides and skins are Portugal's two main farm import categories. The country also must import about 60 percent of its food needs.

U.S. farm exports to Portugal registered a relatively strong performance in 1988 due in large part to the increase in sales of feed ingredients other than coarse grain. Corn gluten feed alone accounted for nearly \$73 million, up from almost \$43 million in 1987.

Other U.S. products with an increased export value in 1988

included tallow, almonds, seeds, and poultry parts.

Soybeans retained their position as the single commodity with the highest value among U.S. agricultural exports to Portugal. However, both value and quantities were well below those of 1987, partly because of reduced U.S. supplies and partly because of an overall decline in Portuguese crushings.

U.S. corn exports, which 5 years ago had an annual value of approximately \$300 million, were down to \$50 million in 1988. One reason for the drop is the trend in Portugal of substituting nongrain feed ingredients for corn.

Cotton and hides and skins, traditionally among the principal U.S. farm exports to Portugal, also declined in 1988. While the decline in cotton was relatively small, the value of exports of hides and skins was about half of the 1987 level. Price competition was largely responsible in both cases.

Exports of U.S. rice to Portugal registered a further drop in 1988 and now are a fraction of earlier levels, due primarily to tariff preferences to other EC countries.

Portuguese exports of agricultural products totaled \$1.2 billion in 1988. Cork, wines, tripe, tomato paste, and cheeses are Portugal's principal farm exports.

The United States is a market for less than one-tenth of Portugal's exports. Most of the remainder goes to other members of the EC.

Trade policy and prospects

Portugal does not impose import restrictions on most agricultural products. Cotton, hides and skins, and soybeans are admitted free of duty. However, a quota is in effect on domestic consumption of soybean oil for food.

Variable levies apply to feed grains, wheat, and rice. High-value, processed products are also subject to additional levies based on their sugar, flour, and milk content.

In January 1987, the United States and the EC announced agreement on how the United States would be compensated for trade losses stemming from the accession of Portugal and Spain to the EC.

Though not part of the formal enlargement settlement, the EC eliminated the requirement that Portugal purchase at least 15 percent of its feed grains from the EC. This created an additional market opportunity for feed grains of about 400,000 metric tons for all third-country suppliers each year. During 1988, Portugal imported 811,000 metric tons of U.S. feed grains.

When Portugal joined the EC, the requirement for advance licenses for most agricultural imports was dropped and the value-added tax went into effect.

The impact of the tax on imports of most agricultural products is negligible. However, quotas were imposed on vegetable oils for domestic food use, a restriction that affects oilseed and vegetable oil imports.

For the next 2 years or so, no major changes are likely to occur in the composition and total value of U.S. farm exports to Portugal.

Though policy constraints and shrinking foreign outlets for Portuguese soybean products are likely to restrict overall demand for imports of soybeans, the U.S. share of the soybean market could improve if U.S. crop conditions return to normal.

In the poultry sector, Portugal, unlike other EC countries, continues to accept the U.S. Department of Agriculture's certificate of wholesomeness as sufficient evidence of the health safety of the products.

The U.S. share of Portugal's wheat import market could continue to decline because of the strong price competition from third countries, especially Saudi Arabia and Canada. ●

Romania

Profile of agriculture

Romania is a major agricultural producer in Eastern Europe. Approximately 28 percent of the gross national product comes from agriculture, mainly from grains, oilseeds, sugar beets, and livestock production.

Over 85 percent of the country's agricultural land is in the socialized sector as either state or cooperative farms. A large percentage of private farmland is in hilly areas where large-scale farming is impractical.

The small private sector is a significant producer of meat, fruits, and vegetables. Families on cooperative and state farms also have small

private plots, and sell their output in regulated private markets.

Farm employment is down to less than 30 percent of the workforce, compared with a 50-percent share in 1970.

Production highlights

Agricultural production, a mainstay in the Romanian economy, rose according to official figures nearly 3 percent in 1988, although production was plagued by abnormally dry weather—for the fourth time in the past 6 years.

However, favorable conditions up to June resulted in record winter wheat and barley harvests. Total wheat production stood at about 9 million tons in 1988.

Practically all wheat and barley are winter varieties with only insignificant amounts planted in the spring. The barley outturn totaled 2.2 million tons, compared with 1.8 million tons the year earlier.

The summer crops, particularly corn, sunflowers, and soybeans, suffered severe drops in yields during the 1988 drought.

Production of field vegetables is officially estimated at 10.1 million tons and fruit production at 2.9 million tons for 1988.

Expectations for the 1989 agricultural performance are not bright. Significant losses between field and consumer will continue—especially for perishable fruits and vegetables—due to the lack of adequate rural infrastructure, marketing channels, and packaging technology.



Romania at a Glance

Population (1985): 22.9 million

Urban population: 11.7 million

Population growth rate: 0.4%

Per capita income (1988): \$6,690

Arable land area: 176,500 square kilometers

Major crops: Corn, wheat, potatoes, soybeans, sugar beets, fruits, vegetables

Livestock sector: Poultry, cattle, sheep, hogs

Leading agricultural exports:

Grains, sheep meat, fruits, vegetables, vegetable oils (sunflowerseed and rapeseed)

Leading agricultural imports: Corn, hides and skins, soybeans, soybean meal

Agricultural imports as share of total imports: About 4%

Percent of population in agriculture: 28%

Restricted energy and fertilizer inputs probably will continue to depress total agricultural output and a high use of manual technology will continue to dampen overall labor productivity in agriculture.

Agricultural Production

	1986	1987
	<i>mil. metric tons</i>	
Crop production		
Corn	20.2	18.4
Potatoes	9.1	7.6
Soybeans	0.5	0.6
Sugar beets	7.1	7.2
Sunflowers	1.0	1.1
Wheat & rye	7.4	9.7

	1987	1988
	<i>millions</i>	
Livestock numbers¹		
Cattle	7.2	7.2
Hogs	14.7	15.2
Poultry	131.0	136.0
Sheep	18.8	18.8

¹ Estimates as of January each year.

Farm and food policy

Agricultural policy in Romania stresses higher output of all commodities, a large percent of which is channeled towards export markets to reduce the foreign debt. In March 1989, Romania announced that it was debt-free.

Domestic consumption is restricted by food rationing.

Livestock production is hampered by generally low population numbers and breeding and reproduction rates, as well as insufficient feedstuffs resulting partly because of restrictions on imports.

Although some specialized livestock centers are doing fairly well, overall output generally lags behind the Government's production goals.

Extensive controls over the marketing of private sector output compound the poor food supply and encourage these farmers to produce only for their own use and to meet their contract agreements with state and collective farms.

Romania's rural development project, "systematizarea," attracted much attention in 1988. Under this plan, the rural landscape is to be significantly changed by the year 2000 as smaller villages are resettled into agro-industrial centers. The move toward greater centralization will translate into a sizable loss of private plots.

However, for those retaining private plots, greater emphasis will be placed on self-sufficiency and diversity. According to plan, a typical private producer household of two or three persons should raise the fol-

lowing: 1 cow, 5 sheep or 2 goats, 1 or 2 hogs, 10 chickens, 60 to 80 broilers, 5 to 8 other poultry, and 10 to 15 rabbits. They should also maintain one beehive and enough silkworms to produce 4-5 kilograms of silk.

The nation's overall economic policy stresses heavy and raw-material industries at the expense of agriculture and light and service industries.

The relative inefficiency of agricultural methods and low productivity continue to be serious problems. Although the agricultural sector has been receiving greater attention as a valuable source of hard-currency earnings, Romania's development strategy, which focuses on heavy industry, has prevailed for the past several years.

Imports and exports

Romania's role in world agricultural trade is not fully known because Romania no longer publishes trade statistics. Generally, sharply declining imports have been characteristic for the past several years.

Imports of U.S. agricultural commodities for 1988 are estimated at nearly \$104 million. Three product categories—soybeans and soybean meal, hides and skins, and corn seed—accounted for more than 90 percent of the total.

Due to higher U.S. prices, Romanian imports of soybeans and products dropped drastically in 1988 from year-earlier levels. Imports of U.S. cattle hides, however, more than doubled the previous year's total.

Romania is traditionally a net agricultural exporter, particularly of grain. However, production setbacks, economic mismanagement, and the long-term decline in Romania's agricultural sector have led to food shortages and much-reduced exports.

Agriculture accounts for less than 7 percent of Romania's total exports. The leading farm exports are grains, mutton and lamb, fruits, vegetables, and vegetable oils (sunflowerseed and rapeseed).

Farm exports to the United States totaled \$12.7 million, leaving a large U.S. farm trade surplus. Canned pork accounted for about three-fourths of all agricultural exports to the United States. Alcoholic beverages accounted for 16 percent.

In July 1988 Romania renounced its most-favored-nation (MFN) trade status with the United States, which decreases the attractiveness of Romanian exports to the United States.

Trade policy and prospects

For the most part, trade—like production—is centrally planned. Trade is conducted through Government agencies, and credit and the availability of foreign exchange are major factors influencing purchasing decisions.

In January 1989, Romania's Foreign Trade Organizations were reorganized to increase their control over trade. ●

Senegal

Profile of agriculture

Agriculture occupies a dominant place in Senegal's economy. It employs approximately 70 percent of the labor force, a much larger portion than its one-fifth share of the gross domestic product would indicate.

Agricultural production in Senegal is heavily dependent on dryland crop cultivation, and periodic drought is a persistent problem.

The country's oil milling industry, which is mainly used to process peanuts, the leading cash crop, accounts for about 12 percent of total industrial output.

Senegal is a major producer of peanuts and is trying to diversify into other crops, such as cotton, sugarcane, and vegetables.

In years of favorable rainfall, the country approaches self-sufficiency in millet and sorghum, the most important staple crops.

Production highlights

Although Senegal recorded more rainfall in 1988 than in 1987, the late start of the rains and the poor distribution hurt development of some crops.

Millet and sorghum together supply about two-thirds of the calories in the average Senegalese diet.

Agricultural Production

	1987/88	1988/89
	<i>thous. metric tons</i>	
Crop production ¹		
Cassava	53	56
Corn	114	123
Millet	690	500
Peanuts	932	690
Rice	136	146
Seed cotton	36	45
Sorghum	111	94

¹ Crop years are July-June.

About two-fifths of Senegal's cultivated land is devoted to peanuts. Production rose 14 percent in 1988 to 932,000 tons, but output is projected to decline by roughly one-fourth in 1989 due to bad weather during the growing season.

Largely as a result of expanded plantings, Senegal's production of seed cotton is expected to increase in 1989.

Under the country's 5-year plan, cotton area is programmed to expand by about 5,000 hectares a year until it reaches 40,000 hectares in 1991. Production of seed cotton is projected to reach 60,000 tons at that time, mainly because of increased area, not higher yields.

The central aim of Senegal's agricultural policy is to reduce the extensive Government involvement in marketing, increase price incentives to farmers, promote self-sufficiency in millet and sorghum production, and curtail rice imports.

To meet these goals, the Government continues to press ahead with measures to increase farm output and productivity.

Major reforms include reducing the amount of credit for agricultural inputs to encourage cash purchases, gradually eliminating the subsidy on fertilizer, and increasing the role of the private sector in marketing agricultural products.

Imports and exports

Imports of food products now account for about one-fifth of Senegal's total imports.

Even in years of good weather, Senegal falls far short of meeting its requirements of rice.

Imports of U.S. agricultural products totaled \$31 million in fiscal 1988, including \$3 million worth of P.L. 480 shipments. The leading imports were rice, \$18 million; dairy products, \$4 million; tallow, \$3 million; wheat, \$2 million; and tobacco, \$2 million.



Senegal at a Glance

Population (1988): 7 million

Urban population: 2.1 million

Population growth rate: 2.9%

Per capita income (1986): \$554

Major crops: Millet, sorghum, peanuts, rice, cotton

Livestock sector: Poultry, sheep

Leading agricultural exports:

Peanuts and products, cotton, vegetables

Leading agricultural imports: Rice, wheat

Percent of population in agriculture: 70%

Although the 1989 peanut crop—the top farm export earner—suffered because of a short rainy season, carryover stocks are sufficient to satisfy domestic and export demand.

Trade policy and prospects

Senegal is entering the crucial phase of its 1985-92 structural adjustment program, with the Government trying to shift the focus of its trade liberalization measures from austerity to stimulating growth.

The country is still struggling with a foreign debt that requires close to 30 its percent of annual export earnings to service. Nonetheless, Senegal's efforts to put its economy on a sustainable growth path have been applauded by major assistance donors, such as the International Monetary Fund and the World Bank. ●

Sierra Leone

Profile of agriculture

Agriculture, including forestry and fishing, is Sierra Leone's most important economic sector and contributes about 35 percent of the gross national product.

Agriculture employs around 65 percent of the nation's workforce. Most of the farming hovers at the subsistence level. Sierra Leone's per capita income has dropped sharply in the 1980's to about \$240 per year.

About four of every five farmers in Sierra Leone grow rice, the country's main food crop, along with other crops. Rice supplies over 50 percent of the total calories in the average diet.

Since rice production normally does not meet demand, some imports are necessary.

Besides rice, the other important crops are corn, cassava, and peanuts. The leading crops for export are cocoa, coffee, palm kernels, and ginger.

The livestock sector remains relatively small, with the main poultry operations centered around Freetown, the nation's capital on the Atlantic Coast. Sheep herding is located principally in the northern districts.

Production highlights

The rice harvest rose 8 percent to 330,000 tons in 1988, but is estimated at 300,000 in 1989, a drop of around 10 percent.

Sierra Leone's livestock sector remains underdeveloped because of low consumer incomes, limited feed production, and high production costs.

The national sheep herd was estimated at 320,000 head as of March 1989 and is largely handled by nomadic tribes in the northern part of the country.

The poultry industry is more developed and produces about 600,000 birds per year, largely in the Freetown area.

Farm and food policy

Sierra Leone's foremost farm problem is to feed a rapidly growing population with rice at an affordable price.

Rice prices have been going up. To cushion the effect on urban consumers, the Government granted significant wage increases, which, in turn, exacerbated inflation, now running at about 200 percent per year.

Food is the largest single expenditure facing consumers. It accounts for more than 40 percent of the cost-of-living index of urban consumers.

The Government embarked in 1986 on a major investment program aimed at boosting rice production and reducing rice imports.

The program calls for mobilizing resources to help the individual family farm improve cultivation methods, yields, and output. The program aims at massive extension efforts backed by adequate supplies of fertilizers, pesticides, and better seeds.

Also, arrangements for producer credits, marketing aids, and price incentives for farmers are envisioned under the program. However, the entire program depends heavily on financial support through foreign aid.

Imports and exports

Despite the Government's efforts to raise the production of rice, imports have been rising in recent years. They stood at 109,000 tons in 1987, at 110,000 in 1988, and are projected at 130,000 tons in 1989.



Sierra Leone at a Glance

Population (1988): 3.7 million

Population growth rate: 2.7%

Per capita income (1988): \$240

Major crops: Corn, cassava, cocoa, rice, peanuts

Livestock sector: Poultry, sheep

Leading agricultural exports:

Cocoa, coffee, ginger

Leading agricultural imports: Rice, wheat, sugar

Percent of population in agriculture: 65%

The import and marketing of rice has been conducted through private commercial channels since August 1988.

Wheat imports, at 25,000 tons in 1988, have not changed much in the past few years.

Sierra Leone's imports of U.S. agricultural products totaled \$6.8 million in 1987. The principal imports were grains, \$4.6 million; vegetable oils, \$1.2 million; and livestock, dairy, and poultry, \$800,000.

Crops grown for export include coffee, cocoa, and palm kernels.

Coffee exports rose over 50 percent to 8,700 tons in 1988 and cocoa exports expanded 8 percent to 9,000 tons. ●

South Africa

Profile of agriculture

South Africa has a well-developed, diversified agriculture that produces a wide range of horticultural and livestock products. The country also is a major corn producer, but is vulnerable to occasional droughts.

Exports accounted for 23 percent of the value of agricultural production in 1987, when the effects of a 6-year drought were still being felt. In a more normal season, exports constitute more than 30 percent of the value of agricultural products.

Because it lies in the Southern Hemisphere, South Africa's seasons are the opposite of many Northern Hemisphere producers, allowing off-season selling in many markets.

South Africa's major agricultural exports are wool, fresh and proc-

essed fruits, corn, sugar, hides and skins, and mohair. The country regularly imports rice, tea, coffee, and spices, and has to turn to substantial cereal imports in times of drought. South African exports to the United States were curtailed by U.S. trade sanctions in late 1986.

Production highlights

South African agricultural production increased roughly 5 percent during the July 1987-June 1988 season compared to the previous year. The value of production increased 18 percent during this period to \$35.3 billion, boosted primarily by higher producer prices for field crops, horticultural items, and livestock products.

As a result of inclement weather and marketing problems, corn production declined to 7.1 million tons in 1988 (May 1987-April 1988) from the 7.5-million-ton crop marketed a year earlier.

Wheat production increased from the 2.3 million tons marketed during October 1986-September 1987 to 3.0 million tons marketed from October 1987-September 1988.

Sugarcane production fell from about 21 million tons from the 1987 crop to 19 million for the 1988 crop, mainly a result of poor weather.

Fruit crops in 1988 were bigger than in 1987 as the winter rainfall and irrigated areas were not affected by weather problems, as were summer rainfall areas.

Livestock product prices were high and beef and mutton were in short supply. Egg and broiler production increased, broilers by 14 percent from 448,000 tons in 1987 to 512,000 tons in 1988 and eggs by 11 percent to 3.7 billion in 1988. Wool production held steady, but record exports produced record 1988 farm income figures.



South Africa at a Glance

Population (1988): 37 million

Urban population: 20 million

Population growth rate: 2.2%

Per capita income (1988): \$1,700

Arable land area: 122,104 square kilometers

Major crops: Corn, wheat, sugarcane, deciduous and citrus fruits, subtropical fruits, tobacco, cotton

Livestock sector: Cattle, sheep, poultry, game farming

Leading agricultural exports: Corn, fruits, wool, sugar, hides and skins

Leading agricultural imports:
Normal years: Rice, tallow, coffee, tobacco, processed foods.

Drought years: Oilseeds, grains

Agricultural imports as share of total imports (1987): 5.8%

U.S. share of total agricultural imports (1987): 6.7%

Percent of population in agriculture: 30%

Citrus producers had a bumper season in 1988. Gross earnings from exports increased 40 percent in 1988. This was the result of excellent world prices, a record crop of 892,000 tons, and a decrease in the value of the South African currency, the rand. Net payments to farmers increased by 33 percent.

Farm and food policy

Food self-sufficiency, a long-standing goal, has become less

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop production ¹		
Citrus	0.81	0.89
Corn	7.50	7.08
Fruits	0.99	1.02
Sugarcane	21.06	18.80
Tobacco	0.03	0.04
Wheat	2.32	2.95
	1986/87	1987/88
	<i>millions</i>	
Livestock numbers ²		
Beef cattle	10.00	10.40
Dairy cows	1.92	1.81
Hogs	1.42	1.51
Sheep	29.73	29.64

¹ Crop years are Jan.-Dec. for fruits and tobacco; Feb.-Jan. for citrus; May-April for corn; April-March for sugarcane; and Oct.-Sept. for wheat.

² Estimates as of January 1 each year.

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Beef	0.1	31.8
Coffee	0	26.4
Cotton	2.3	40.5
Poultry products	1.4	15.5
Rice	17.1	60.9
Tallow	0.3	16.7
Tobacco	0.2	33.0
Vegetable oils	1.5	69.5
Total²	55.3	818.4

¹ Values are shown in U.S. dollars at US\$1=2.04 rand. Includes commercial and concessional imports.

² Includes products not listed above.

important in spite of trade sanctions against South Africa. This is due to the fact that sanctions are mainly against South Africa's exports and not against selling food to South Africa. Providing stable, guaranteed prices and adequate marketing infrastructure to support prices had been major policy objectives. The Government subsidized farmers for credit, marketing, and infrastructure while it supported producer prices.

More recently, however, the Government's emphasis in agriculture has been shifting to market-related production and effective competition.

The main reason for the shift in emphasis is the high cost of supporting the agricultural system, which is prone to overproduction, especially of grains. It is cheaper to import to meet needs resulting from production shortfalls than to finance the

disposal of surpluses on the international market.

The latest trend in setting producer prices is to allow market forces to play a role. For instance, in the corn and wheat industries, producer prices are based on expected earnings in the local and export markets. Another example in the trend toward a free market is the lifting of restrictions on new entrants to cotton ginning, wheat milling, milk producing and distributing, and oilseed crushing.

However, the Government is still involved to a lesser degree in the international market for agricultural products. Although South Africa depends on the international market for the sale of a large portion of its products, the Government has warned that it cannot afford the assistance needed to compete directly in some of these markets, such as the grain market.

Any international moves to limit subsidies will have a positive effect on South Africa's production decisions. South African farmers can compete internationally when competitor subsidies are not a factor in the markets and they are able to increase production for the export market.

Some sectors of the country's agriculture, especially those needing a high level of inputs, have become high-cost operations. This is especially the case with summer grain producers, who have been plagued by high farm debt and declining Government outlays. Most sectors also are suffering the effects of many years of double-digit inflation, which is affecting the cost of inputs, packaging, and transportation.

The effect of inflation is, in the short term, being minimized by the declining value of the South African rand. This has had the effect of increasing the income from products

exported, but it has also increased the cost of imported inputs such as fuel. The declining value of the rand is mainly the result of political factors.

Imports and exports

Total agricultural imports amounted to \$818.3 million in 1987, compared with \$733.7 million in 1986. In 1987, the major imports were vegetable oils (\$69.5 million), rice (\$60.9 million), cotton (\$40.5 million), tobacco (\$33 million), beef (\$31.8 million), coffee (\$26.4 million), tallow (\$16.7 million), and poultry meat (\$15.5 million).

Vegetable oil, cotton, tobacco, beef, and meat imports were partly the result of the drought. The more traditional imports are rice, coffee, and tallow, as well as a wide range of other agricultural products and processed foods for the delicatessen market.

South Africa's agricultural exports amounted to \$1.8 billion in 1987. Major exports were fresh fruit (\$322.2 million), wool (\$282.5 million), grains (\$215.4 million), sugar (\$206.3 million), preserved fruit and vegetables (\$158.4 million), and hides and skins (\$136.9 million). In a "normal" year, grain exports play a larger role.

In 1987, the United States exported \$55.3 million worth of agricultural products to South Africa, or nearly 7 percent of the country's imports. Major U.S. items were rice, poultry products, cotton, and vegetable oils. ●

Soviet Union

Profile of agriculture

The Soviet Union is one of the world's largest producers of grains, meat, milk, potatoes, fish, and

cotton, but it is also one of the world's largest importers of grains and meat. The country imports nearly a million metric tons of meat each year and accounts for roughly one-sixth of total world grain imports. Cotton and forest products are the major agricultural exports, followed by furs.

Soviet agriculture employs about 20 percent of the country's workforce, contributes the same percentage to the gross national product, and absorbs 27 percent of total capital investment—unusually high figures for an industrialized nation.

Agriculture remains one of the major economic problems, despite increased investment, greater incentives, and increases in farm income. It absorbs large quantities of inputs with only marginal production gains, denying much-needed inputs to other sectors. Harsh and unpredictable weather adds to Soviet agricultural difficulties.

Agriculture is organized into large state farms, smaller collective farms, and small private plots. Although the private plots occupy only about 3 percent of total sown area, they produce as much as a third of the country's meat, milk, and eggs, and two-thirds of its potatoes.

Production highlights

Agricultural production increased 0.7 percent in 1988. That was an improvement over 1987's 0.2-percent growth, but was far short of 1986's 5.3-percent rate. The 1988 plan had called for a 6.3-percent increase above actual 1987 production. The Soviet livestock sector grew 3.4 percent in 1988, but crop production shrank 2.7 percent.

The major disappointment was the grain harvest. Although quality was good, grain production fell to 195 million metric tons, 16 million tons below 1987's crop. Production of potatoes—the Soviets' "second bread"—was down 13 million tons



The Soviet Union at a Glance

Population (1988): 286 million

Urban population: 189 million

Population growth rate: 0.9%

Per capita income (1988): \$7,400

Arable land area: 5,600,000 square kilometers

Major crops: Wheat, coarse grains, potatoes, sugar beets, cotton, sunflowers, flax, fruits, vegetables

Livestock sector: Cattle, dairy cows, sheep, hogs, poultry, goats

Leading agricultural exports: Cotton, forest products, furs, fish, and some grains, flour-milling products, beverages, wool

Leading agricultural imports: Wheat, corn, barley, sorghum, meat, sugar, vegetable oils, oilseeds, fruits, vegetables, beverages, tobacco

Agricultural imports as share of total imports: 16-22%

U.S. share of total agricultural imports: 10-14%

Percent of population in agriculture: 28%

Agricultural Production		
	1987	1988
	mil. metric tons	
Crop production		
Barley	58.5	44.5
Corn	14.8	16.0
Cotton	8.1	8.7
Fruits, berries	14.3	14.9
Oats	18.5	15.3
Potatoes	75.9	62.7
Rye	18.1	18.5
Sugar beets	90.4	87.8
Sunflowers	6.2	6.2
Vegetables	29.2	29.3
Wheat	83.3	84.4
	1988	1989
	millions	
Livestock numbers ¹		
All cattle	120.6	118.8
Cows	42.0	41.5
Goats	6.5	6.5
Hogs and pigs	77.3	77.7
Horses	5.9	6.0
Poultry	1,175	1,190
Sheep	140.8	139.4
	1987	1988
	mil. metric tons ²	
Animal product output		
Beef and veal	8,288	8,450
Eggs (billions)	82.7	84.6
Milk	103.8	106.4
Mutton	905	900
Pork	6,324	6,400
Poultry	3,126	3,250
¹ Estimates as of January 1 each year		
² Except eggs, which are shown in billions of eggs produced.		

¹ Estimates as of January 1 each year

² Except eggs, which are shown in billions of eggs produced.

to 62.7 million, and output also dropped for sugar beets, grapes, and flax. Output rose for vegetables, fruits and berries, and raw cotton.

Weather was a key factor in 1988's poor crop performance. Drought hit several areas, leaving 5 million hectares of grain unharvested.

The livestock sector fared better. Production of all livestock products increased, exceeding planned amounts. However, these promising livestock results were somewhat

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Barley	—	220
Coffee, cocoa, tea	—	687
Corn	959	1,243
Cotton	0	166
Fats and industrial oils (tallow)	26	179
Fruits and some vegetables	47	1,197
Livestock and products	0	2,200
Rice	—	169
Soybeans and meal	171	291 ²
Sugar	—	4,490
Tobacco and prod.	0.9	894
Wheat	823	2,358
Vegetable oils	—	173
Vegetables	—	722
Total³	2,048	17,910

¹ Values are shown in U.S. dollars at U.S.\$1=1.62 rubles.

² Soybeans only.

³ Includes products not listed above.

— = No entry shown in Soviet statistics

offset by spoilage and losses resulting from inadequate storage.

Overall, the financial health of the Soviet farm sector recorded some improvement in 1988. Farm profits rose 22 percent above 1987's level, and the number of insolvent farms dropped. The growth in profits partly reflected the expansion of negotiated pricing practices and an increase in bonus payments for farm product sales to the Government.

The 1989 plan calls for 2-percent growth in farm output. High targets

are set for grains (to 241 million tons), potatoes, fruits, and berries. More modest growth is envisioned for vegetables, sunflowerseed, cotton, meat, and milk.

Improvements are also called for in output of horticultural, confectionary, and bakery products. Capital investment is due to grow 46 percent in the food processing industry and 60 percent in the meat and milk products industry.

Farm and food policy

Economic restructuring continued in the agro-industrial sector in 1988, but the added attention has yet to produce the results that the leadership needs. While output of farm products grew in 1988, the food supply situation remained tense and was aggravated by continuing problems with low-quality products.

Losses in the food processing industry remain large. Some estimates suggest that total food supplies to consumers would increase 25 percent if all losses could be prevented. Sixty percent of food processing equipment is worn out or obsolete.

The central Government has allocated \$124 billion over 8 years for improvements in food processing, storage, and distribution. The 1989 budget also calls for more funds to improve the rural infrastructure, including roads.

Imports and exports

Soviet grain imports from all sources were valued at an estimated \$4 billion in 1988, up from \$2.7 billion in 1987. Imports of sugar and meat dropped moderately, while oilseed imports increased. The Soviets continue to rely heavily on Eastern Europe for meat, fruit, and vegetable imports.

Soviet agricultural exports increased to an estimated \$2.9 billion in 1988, up from 1987's \$2.4 billion. Cotton accounted for nearly one-half the total.

U.S. agricultural exports to the Soviet Union more than doubled in value from 1987 to 1988.

The major U.S. agricultural import from the Soviet Union is furskins. U.S. purchases were valued at \$16.8 million in 1988, down slightly from 1987.

Trade policy and prospects

The Soviet Union is a major importer of grains and is likely to remain so for the foreseeable future. In 1988, the USSR imported a total of 36 million tons.

Soybeans for livestock feed will also continue to be a popular import, despite Soviet efforts to increase oilseed production. Vegetable oil imports, however, may be displaced by increased Soviet processing of imported oilseeds.

In the livestock sector, the Soviets have shown a willingness to import semen, embryos, and breeding stock to improve their dairy herds.

Soviet agrichemicals are generally of lower quality than those produced in the West. Thus, imported chemicals will remain an important factor in Soviet agriculture, but little or no short-term growth in imports is foreseen. Food processing and storage equipment and technology are other items of possible interest.

The Soviets appear receptive to joint ventures that offer access to Western technology, equipment, and financing. As of January 1, 1989, 164 joint ventures were registered with firms from capitalist nations.

A major import constraint is the USSR's tight hard-currency situation. Although one highlight of 1988 was the granting of trade rights to all ministries, republics, and enterprises, these organizations are responsible for earning hard currency to finance any imports. Many have little to sell to foreign customers. The search for financing and the decentralization of trade decisions may add to the obstacles facing U.S. firms seeking sales to the Soviets. ●

Spain

S

Profile of agriculture

Although agriculture's contribution to Spain's overall economy has slipped somewhat in recent years, agriculture still employs nearly a fifth of the population.

Following accession to the European Community (EC) in 1986, Spain's agricultural productivity and ability to compete with other nations have taken on renewed importance.

Harsh terrain and limited rainfall have contributed to the traditionally low productivity of Spanish agriculture. However, significant expansion of irrigation and other technological advances in recent years have resulted in considerable gains in productivity. Despite these efforts, Spanish agriculture still lags behind most other European countries.

Production highlights

Led by the "grain crop of the century," Spanish agriculture had its second consecutive excellent year in 1988. Total agricultural output increased 4.3 percent in 1988. Spanish net farm income increased 10.7 percent over that of 1987.

Spain's 1988 grain crop of 23.7 million tons was the largest in its history, 15 percent above the year before. The barley harvest increased 23 percent to a record 12.1 million tons and wheat production rose by 12 percent to 6.5 million tons. Unfortunately, wheat quality was poor, and exports dropped dramatically to only 150,000 tons, compared with 600,000 the previous year.

After 4 years of better-than-average crops, olive oil production in 1988 fell to 330,000 tons as a result of a natural decline in productivity of trees after a heavy crop and rains at blossom time.

Sunflowerseed output rose for the third consecutive year. At an estimated 1.25 million tons, the 1988 crop was 25 percent greater than a year earlier.

Due to below-freezing temperatures in the early part of 1988 and abnormally cool and rainy weather well into the summer, Spain's citrus crop was down 14 percent to 3.9 million tons. The 1988 lemon crop was down 20 percent.

Spain's tobacco crop in 1988, at 39,700 tons, was 10 percent above the previous year despite adverse weather and reduced area. Most of the increase was in burley.

Although cotton area increased 70 percent in 1988, production rose only 43 percent to 118,000 tons.

Cool, rainy weather reduced Spain's wine production by roughly 46 percent to 22.7 million hectoliters in 1988.

Spain's 1988 almond crop, estimated at 40,000 tons, was 38 percent below the previous year, reflecting heavy damage from below-freezing temperatures.



Spain at a Glance

Population (1988): 39.2 million

Urban population: 23.0 million

Population growth rate: 0.53%

Per capita income (1988): \$7,240

Arable land area: 154,814 square kilometers

Major crops: Grains, citrus, fruits, vegetables, wine grapes

Livestock sector: Cattle, hogs, chickens, sheep

Leading agricultural exports: Citrus, fruits, vegetables, wine

Leading agricultural imports: Corn, soybeans, coffee, tobacco, forest products, hides and skins, cotton, live cattle

Agricultural imports as share of total imports: 11%

U.S. share of total agricultural imports: 17%

Percent of population in agriculture: 19%

Agricultural Production

	1987	1988
	mil. metric tons	
Crop production		
Alfalfa	12.73	13.57
Almonds	0.22	0.13
Barley	9.84	12.07
Lemons	0.76	0.61
Olive oil	0.69	0.33
Orange	2.44	2.16
Tangerines	1.31	1.08
Veg. & melons	11.35	12.87
Wine (mil.hl.)	39.00	21.67
Wheat	5.79	6.51

	1987	1988
	millions	
Livestock numbers ¹		
Cattle		
Beef	3.1	3.1
Dairy	1.9	1.9
Hogs	15.7	16.9
Poultry	503.0	480.0
Sheep	17.1	17.8

¹ Estimates as of January 1 each year.

The livestock sector thrived in 1988, mainly due to excellent pasture conditions and high product prices. Output of almost all types of animal products increased and farmers received profitable prices, especially for beef and dairy products. Pork production rose 11 percent to 1.63 million tons, while lamb and goat meat output rose 5 percent to 236,000 tons. Beef production rose marginally to 450,000 tons.

Farm and food policy

As a result of Spain's accession to the EC, agricultural policy deci-

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions ¹</i>	
Selected products		
Almonds	24	25
Corn	244	277
Corn gluten feed	54	54
Cotton	26	153
Forest products	115	754
Sorghum	23	34
Soybean meal	16	390
Soybeans	319	544
Tobacco	168	301
Walnuts	25	27
Total ²	1,176	6,919

¹ Values are shown in U.S. dollars at US\$1=116.5 pesetas. Includes commercial and concessional imports.

² Includes products not listed above.

\$6.8 billion from \$6 billion in 1987, imports increased by much more, rising to \$6.9 billion from \$5.7 billion. Roughly 60 percent of the import total was of high-value products. Spanish imports of high-value products in 1988 totaled \$4.1 billion, 17 percent above 1987. EC countries supplied about 75-80 percent of this amount.

By value, imports of processed fruits and vegetables, oil meals (particularly soybean meal), dairy products, sugar and confectionery products, beverages, and spirits showed the greatest increases.

The United States enjoyed its best agricultural trade year with Spain since accession, with sales amounting to almost \$1.2 billion in 1988. This put Spain once more among the top 10 single-country export markets for U.S. farm, food, and forestry products.

The growth in U.S. exports to Spain in 1988 of almost 18 percent was led by soybeans (worth about \$319 million), corn (\$244 million), tobacco (\$168 million), and forest products (\$115 million).

U.S. high-value product exports to Spain rose 10 percent to \$220 million. The United States supplied almost all of Spain's imports of such high-value products as corn gluten feed (\$54 million), walnuts (\$25 million), almonds (\$24 million), hides and skins (\$22 million), soybean meal (\$16 million), and brewers' grains (\$10 million).

Spain's most important agricultural export in 1988 was citrus, valued at \$1.2 billion. At \$886 million, fresh vegetable exports were up 17 percent, while processed fruit and vegetable exports increased 14 percent to \$704 million.

Increases also were recorded for Spain's other leading export commodities, with shipments in 1988 valued at \$544 million for wine, \$479 million for olives oil, \$355 million for noncitrus fruits, and \$242 million for barley.

Trade policy and prospects

As agreed in the Treaty of Accession to the EC, Spain has a maximum transitional period of 7 years, which began on March 1, 1986, in which to eliminate customs duties on imports from other member countries of the EC. During this 7-year period, duties are being reduced at varying annual rates.

By January 1, 1993, the duties on Spain's imports from non-EC countries, as well as quantitative restrictions and other similar trade measures, will have to be aligned with those of the EC.

A major bilateral trade policy issue between Spain and the United States is the effect of Spain's oilseed regime (retained for a transitional period under provisions of the EC accession treaty) on U.S. soybean exports.

Until 1991, Spanish soybean crushers are allowed to sell only 112,000 tons of soybean oil per year into the domestic market, and soybean oil prices are fixed at prices well above world market prices. The effect of this policy is an increase in the domestic price of soybean oil, curtailing its consumption by making it uncompetitive with other oils available on the Spanish market.

Despite reduced imports of soybeans, soybean meal, and tallow, Spain's imports of U.S. agricultural products in 1988 were nearly \$200 million more than in 1987. This was primarily because of fulfillment of the U.S.-EC Enlargement Agreement, which permitted imports of 2.2 million tons of corn and grain sorghum, as well as larger imports of tallow, forest products, cotton, corn gluten feed, sunflowerseeds, pulses, and nuts. ●

sionmaking is increasingly being transferred away from the Spanish Ministry of Agriculture to the EC.

Spanish farmers continue to be frustrated by delayed payments for their commodities from Brussels. This is often a function of harvests in Spain being earlier than in northern EC member countries. Faced with end-of-season input payments and high interest rates, payment delays pose a serious financial hardship to Spanish farmers.

Spain continues its investment in irrigation and other structural improvements.

Imports and exports

In 1988, Spain again experienced an agricultural trade deficit of \$151 million. While exports of agricultural products increased to

Sweden

Profile of agriculture

Agriculture is a highly productive enterprise in Sweden, despite the country's northern location and long winters. Although only 7 percent of Sweden's land is cultivated for agriculture, Sweden is over 90 percent self-sufficient in agricultural production.

Agriculture contributes about 5 percent to Sweden's gross national product and employs about 5 percent of the labor force. Farmers work small but highly mechanized farms.

Sweden's agriculture is focused on dairy products and meat, which

together account for about 75 percent of total farm sales. Although cattle numbers have declined since the 1960's, higher yields have resulted in surplus milk. Sweden's grain yields also rank among the world's highest.

Production highlights

Production of most crops fell in 1988 for the second consecutive year. While production in 1987 was down primarily because of unfavorable summer weather, the smaller crops in 1988 were a result of smaller areas planted in the fall of 1987, due to a late grain harvest.

Grain production decreased 8 percent to 4.7 million tons in 1988, and the exportable surplus was estimated to be down 50 percent to 540,000 tons. Favorable planting conditions in the fall of 1988 should result in a considerably larger crop in 1989.

The rapeseed crop, which decreased 20 percent in 1987, remained at 250,000 tons in 1988. The forecast for rapeseed production in 1989 is up to 323,000 tons, following a record area planted in the fall of 1988.

Milk production dropped slightly in 1988, but is forecast to increase 2 percent in 1989.

Farm and food policy

Sweden's agricultural policy seeks to keep farm incomes in line with those of other comparable groups of society. This goal has resulted in both relatively high domestic prices to farmers and import levies on grains and livestock products to protect those domestic prices, as well as necessitating expensive price support programs.



Sweden at a Glance

Population (1988): 8.5 million

Urban population: 7.2 million

Population growth rate: 0.10%

Per capita income (1988): \$21,024

Arable land area: 31,497 square kilometers

Major crops: Grains, sugar beets, potatoes

Livestock sector: Dairying, animal husbandry

Leading agricultural exports: Forest products

Leading agricultural imports: Foodstuffs

Agricultural imports as share of total imports: 10.2%

U.S. share of total agricultural imports: 5.6%

Percent of population in agriculture: 4.0%

Agricultural Production

	1988	1989 ¹
	<i>thous. metric tons</i>	
Crop production²		
Barley	1,879	1,956
Milk	3,445	3,523
Oats	1,330	1,578
Potatoes	1,283	1,175
Sugar beets	2,439	2,236
Wheat	1,295	1,630

	1988	1989 ¹
	<i>thous. tons</i>	
Livestock production		
Beef and veal	127	134
Pork	306	304
Eggs (million)	2,081	2,125

¹ Forecast.

² Crops harvested in the fall of 1988 and 1989.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Almonds	17	18
Apples	7	52
Beef	4	57
Cotton, raw	6	6
Crayfish	6	11
Grapes	2	27
Orange juice	3	40
Pork	8	29
Rice	10	18
Tobacco	25	51
Wines	3	101
Total²	221	3,107

¹ Values are shown in U.S. dollars at US\$1=6.12 krona. Includes commercial and concessional imports.

² Includes products not listed above.

Swedish policy makers have worked to reduce large, exportable supplies of grain, as well. The surpluses are due in large measure to excess land under cultivation, maintained to ensure adequate food supplies and emergency stocks.

In 1985, Sweden enacted a Food Policy Act designed to bring agricultural production into balance with domestic consumption. Cultivated land is estimated at more than 2.9 million hectares, while less than 2.6 million hectares is necessary to meet consumption needs.

A Government Grain Committee has estimated the surplus of cultivated land will be about 400,000 hectares in 1990, and 800,000-900,000 hectares by the turn of the century, based on increased productivity and yields in grain production.

To resolve this discrepancy, the Government and the Federation of Swedish Farmers have agreed on an "Adjustment 90" program for 1988, 1989, and 1990. Under the program, participating farmers may not cultivate spring grains. Farmers participating in the program are eligible to receive between \$108 and \$446 per hectare in 1989, based on their location.

Because program payments for 1989 have not been increased from 1988, it is estimated that the area pulled out of production under the "Adjustment 90" program in 1989 will be 250,000 hectares, down from 261,000 hectares in 1988.

Imports and exports

Coffee was Sweden's largest import in 1988, totaling \$227 million—or roughly 9 percent of the import total. Table wines were also a popular import, at \$101 million.

Fruits were other large import items, with banana, apple, tomato, and orange imports totaling \$81 million, \$52 million, \$53 million, and \$46 million, respectively.

Soybean meal imports were up 37 percent to 173,000 tons in 1988, valued at \$61 million, offsetting declining use of imported fishmeal and poor quality feed grains in commercial feeds.

Sweden's agricultural imports from the United States in 1988 were valued at \$221 million, up \$42

million from 1987. This represented approximately 7 percent of Sweden's total imports of \$3.1 billion in 1988.

Sweden's export earnings in 1988 led to a record-high trade surplus, as international demand for Swedish products was strong. Sweden normally produces large exportable quantities of wheat (500,000-1,000,000 tons), dairy, beef, pork, and to a lesser extent, oilseeds.

Sweden exported \$1.1 billion in food and agricultural items in 1988. About 10 percent went to the United States, mainly pork, oats, cheese, and beef.

Sweden's grain exports in 1988 were valued at \$190 million, down slightly from \$191 million in 1987.

Dairy and egg exports in 1988 were valued at \$44 million, down from \$51 million in 1987.

Meat and meat product exports were down to \$60 million, compared to \$69 million in 1987.

Oilseed exports remained almost unchanged at \$3 million.

Trade policy and prospects

Sweden maintains import tariffs, levies, and other restrictions to protect its agricultural producers and processors. These restraints protect commodities produced in Sweden, such as meats, dairy products, and grains. Although most tariffs are low, imports of some fruits and vegetables which are grown in Sweden are subject to high seasonal tariffs. ●

Switzerland

Profile of agriculture

Only one-fourth of the small, landlocked country of Switzerland is cultivated. Forest and pastures account for half of Swiss land area.

The largest farm sector by far is dairy. Milk accounts for one-third of total farm output. Beef and pork production account for other large shares, followed by wine grapes, grains, fruits, poultry, and vegetables.

Despite limited agricultural production, the country is roughly two-thirds self-sufficient in food output, and completely self-sufficient in some commodities (dairy, bread wheat, pork, animal fats, and potatoes).

Production highlights

Swiss growing conditions in 1988 were the best in at least 10

years—an ideal combination of enough rainfall and above-average temperatures.

Good crops and improved livestock prices boosted the total value of agricultural output by 5 percent to \$6.3 billion. Crop output increased 12 percent, largely because for many products, Swiss policies do not permit price declines, even when domestic supplies increase substantially due to good weather.

With fairly stable input costs, the average income of farmers in nonmountain areas increased 15 to 20 percent, almost equal to the income of urban wage-earners for the first time in many years.

Livestock and livestock product output, which accounts for three-fourths of Swiss agricultural production, was up 3 percent in value to \$4.8 billion, largely because of improved prices for beef.

A good potato crop of 925,000 tons contrasted with 1987's bad harvest. Yields per hectare were the second highest on record.

Excellent weather favored production of all types of fruit, except apricots. An 8-percent reduction in the wine grape harvest was due primarily to producers' measures to limit surplus wine production.

The Swiss forest industry showed a slight recovery as the proportion of damaged and diseased trees decreased for the first time since 1983. This improvement may have been related to the good weather.

Swiss soft wheat production continues to exceed domestic baking needs and 100,000 tons of the 1988 crop were denatured and sold for animal feed. Yields averaged 5.9 tons per hectare in 1988, compared with 2.3 tons in the United States. By law, only 15 percent of bread wheat requirements may be imported; such imports consist of hard wheats used to improve bread quality.



Switzerland at a Glance

Population (1988): 6.6 million

Urban population (1987): 4.0 million

Population growth rate: 0.42%

Per capita gross domestic product (1988): \$27,787

Arable land area (1988): 3,026 square kilometers

Major crops: Forage, grains, certain fruits

Livestock sector: Cattle, hogs, poultry

Leading agricultural exports:

Cheese, processed food products

Leading agricultural imports: Wood and forestry products, beverages, fruits, vegetables, meat

Agricultural imports as share of total imports: 10%

U.S. share of total agricultural imports: 4.4%

Percent of population in agriculture: 5%

Feed grain area now accounts for half of total grain area as the Government continues to adjust its support policies to increase animal feed output at the expense of wheat production. Corn accounts for 25 percent of feed grain area, but an additional 43,000 hectares are cultivated, with corn chopped for silage or forage.

Canola or rapeseed accounts for 96 percent of Swiss oilseed output. Production was 50,000 tons in 1988, which gave Switzerland a 20-percent level of oilseed self-sufficiency.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Fruits	0.3	N/A
Grains	0.9	1.2
Potatoes	0.7	0.9
Sugar beets	0.8	0.9
Vegetables	0.3	0.4
Wine grapes (mil. hectoliters)	1.3	1.2

	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Cattle		
Dairy cows	0.81	0.79
Other cattle ²	1.05	1.02
Hogs	1.92	1.92
Poultry	5.68	6.23
Sheep	0.36	0.38

¹ Estimates as of April each year.

² Most Swiss cattle are dual-purpose breeds. "Other cattle" includes all bovine animals except cows.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Animal feed, incl.		
pet food	20	182
Cotton	49	312
Forestry products	8	780
Fruits	32	526
Grains	19	138
Meat	17	293
Oilseeds	14	111
Tobacco	41	145
Vegetables	9	314
Total²	248	5,647

¹ Values are shown in U.S. dollars at US\$1=1.4637 Swiss francs. Includes commercial and concessional imports.

² Includes products not listed above.

One trend to note in Swiss agriculture is the increase in organic food production. Production is controlled by producers' organizations, and the term "organic" is not protected by law, although a common logo for organic products exists. Organic food products now appeal to a larger, heterogeneous group of consumers.

Farm and food policy

The foundation for Swiss agricultural policy is written in its constitution. The two major objectives are preservation of farmers through a viable agriculture and stockpiling to ensure the food supply.

Swiss agricultural policy will continue to support the existing level of food self-sufficiency (60 to 65 percent), maintain emergency

reserve stocks, and support farming in alpine and other difficult zones.

However, policy changes on the horizon include less reliance on the price mechanism for supporting farm income (direct payments amounted to roughly 20 percent of 1988 farm income), less intensive use of polluting resources, more specialty livestock and crop production (such as organic products, exotic fresh vegetables, and hothouse production), and more part-time farming.

Imports and exports

Switzerland imported \$5.6 billion worth of agricultural products in 1988, compared with \$5.1 billion in 1987. Major imports included forestry products (\$780 million), fruits (\$526 million), and vegetables (\$314 million).

The European Community (EC) is the top agricultural supplier to Switzerland, accounting for about two-thirds of total agricultural imports.

Swiss agricultural imports from the United States increased 17 percent to \$248 million in 1988. However, almost half of this increase was due to the further depreciation of the dollar against the Swiss franc. In Swiss currency, the increase was only 10 percent.

Unmanufactured tobacco, pet food, and cotton accounted for most of the increase in imports from the United States. The U.S. share of total Swiss agricultural imports remained at only 4.4 percent, the second lowest level in at least 11 years, and one of the lowest levels in the post World War II period.

Swiss primary agricultural exports are minimal, with cheese the main item. In 1988, Switzerland exported \$399 million worth of cheese and other milk products. Switzerland also exports some products processed from agricultural commodities, including cotton and woolen textiles (\$595 million and \$225 million, respectively), prepared food products (\$248 million), to-

bacco (\$210 million), and chocolate products (\$172 million).

Trade policy and prospects

Agricultural policy has become a major issue as Switzerland prepares its future trading relationships with the EC and the Common European Market of 1992.

While Switzerland has stated that it is not planning to join the EC in the near future, the Government has stated that Switzerland must remain "fit for EC membership" by coordinating or adjusting Swiss regulations to EC regulations, and by negotiating, along with other European Free Trade Association members, further agreements with the EC.

Switzerland also is concerned about its trade relations with other countries demanding major progress in agricultural trade liberalization in the Uruguay Round of General Agreement on Tariffs and Trade (GATT) negotiations.

Switzerland has a strong interest in exporting industrial goods, and market access for those products could be hurt by excessive Swiss agricultural protectionism.

Many Swiss farm prices are double those of neighboring West Germany, and the level of agricultural protection in Switzerland is extremely high. Approximately 70 percent of farm gross income is attributable to Government intervention.

Regarding the Uruguay Round of the GATT, Switzerland considers agriculture to be one of its most difficult challenges. The President of the Swiss Confederation has stated that there is a need for Swiss agriculture to make a further structural adjustment. However, he also has stated that Switzerland must not let its self-sufficiency slip much below the current level of 60 to 65 percent.

Adding to external pressures to liberalize, there is domestic discontent concerning high food prices and pollution problems from livestock waste and farm chemicals. ●

Taiwan

Profile of agriculture

Taiwan has about 80,000 full-time farmers, although 15 percent of the working population (1.2 million people) earn part of their livelihood from agriculture. More than 4 million people live in rural areas, but the rural population is expected to decline to 900,000 by the year 2000, mostly due to urbanization.

Agriculture's contribution to Taiwan's gross national product is about 5 percent. Although the island's industrial and trade success was built largely on agricultural export earnings, industrial and service growth have far exceeded agricultural growth in recent years. Thus, the national trend is toward a smaller, perhaps more competitive, agricultural sector.

Taiwan's agricultural sector registered no growth in 1988, and only 1.5-percent growth is expected in the value of production for 1989. Agricultural growth is constrained by

concerns about pollution, currency appreciation, labor shortages, and dwindling water resources.

Average farm size is slightly more than 1 hectare, and Taiwan has a shrinking, aging supply of farm labor.

Prices for food and agricultural products are generally higher in Taiwan than in most industrialized economies because of infrastructural constraints, import restrictions, and high production costs.

Major crops are rice, sugar, tobacco and horticultural products. Hogs, poultry, beef, and dairy products are the main livestock products. Taiwan also has a large annual aquaculture and seafood harvest.

Production highlights

Rice and sugar production are expected to decline in 1989 after the previous years' crop surpluses. Taiwan authorities have announced their intention to reduce production to the level of domestic demand.

Production of fruit in 1988 was down 8 percent from 1987, forcing prices up 5 to 12 percent. Vegetable crops were damaged by heavy rainfall in 1988 but are expected to recover in 1989.

Hog production in 1989 is expected to match the 1988 level. Poultry production is expected to grow by 1 percent. Authorities have set an 8-percent growth target for beef production, mainly from the dairy herd.

Milk production, which has one of the highest profit margins because of a high guaranteed price, is expected to grow by 8 percent in 1989.

No growth in egg production is expected in 1989, but surplus eggs will remain a problem.

Taiwan's 1989 log production is expected to total 270,000 cubic meters, compared to 253,312 in 1988. An annual production limit of 450,000 cubic meters of logs has been set, but will not be reached due to dwindling supply and



Taiwan at a Glance

Population (1988): 19.8 million

Urban population: 15.6 million

Per capita income (1988): \$5,512

Arable land area: 900,000 hectares

Major crops: Rice, sugarcane, corn, horticultural products

Livestock sector: Swine and poultry

Leading agricultural exports: Sea products, pork, aquaculture products, canned vegetables

Leading agricultural imports: Logs and lumber, cotton, hides and leather, soybeans, corn, wheat, fish meal

Agricultural imports as share of total imports: 12%

U.S. share to total agricultural imports: 93%

Percent of population in agriculture: 15%

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Fruit	0.21	0.23
Rice	1.90	1.84
Sugar	0.48	0.59
Tobacco	0.24	0.20
Vegetables	0.33	0.31

	1987	1988
	<i>millions</i>	
Livestock numbers ¹		
Cattle		
Beef	0.10	0.09
Dairy	0.07	0.08
Hogs	7.13	6.95
Poultry	84.38	92.29
Chicken	68.98	77.65
Duck	12.92	12.23

¹ Estimates as of December 31 each year.

increasing production costs.

Taiwan's deep-sea catch in 1989 is expected to grow by 12 percent; the offshore catch may decline by 4 percent. Authorities have set a zero growth target for onshore fisheries and a 10-percent growth target for aquaculture, which will concentrate more on eel and tilapia production and less on shrimp production.

Farm and food policy

Taiwan's trade-oriented policies have spurred significant economic growth since the mid-1960's.

Agriculture's contribution to the general economy is declining, and agricultural policy has shifted from

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Corn	541	548
Cotton	99	492
Fishmeal	13	272
Hides and skins	256	575
Logs and lumber	177	918
Soybeans	527	552
Wool	7	257
Total²	1,976	5,280

¹ Values are shown in U.S. dollars at US\$1=30.5 new Taiwan dollars. Includes commercial and concessional imports.

² Includes products not listed above.

taxing producers to subsidizing them. Over the years, Taiwan has pursued greater food security and improved farmer welfare through land reform and various rural development programs. However, Taiwan depends on imports of large quantities of raw agricultural products, such as wheat, feedstuffs, cotton, and leather. Taiwan has a farm land reform program which is consolidating small farm lots. Consolidated lands are dedicated to agricultural production and may lead to further mechanization and larger-scale farming.

Growth in agricultural production has exceeded population growth in recent decades, and authorities would like to bring production of rice, sugar, tobacco, and some horticultural products down to domestic consumption levels.

Faced with retailers' criticisms of unfair competitive advantage, Taiwan has announced its intention to phase out the commissary system

for public employees. The system has accounted for as much as 30 percent of retail food purchases at more than 20 percent below normal retail prices.

In mid-1988, farmers organized the nation's first two farmer federations independent of the ruling party and staged a large, violent demonstration in Taipei. While not the only reasons, agricultural trade issues have galvanized the island's emerging independent farm movement.

Imports and exports

Appreciation of the New Taiwan dollar is making imported agricultural products more price competitive and eroding the price competitiveness of many food exports.

According to Taiwan customs statistics, in 1988 Taiwan imported agricultural products valued at \$5.8 billion (up 21 percent from 1987) and exported products valued at \$3.7 billion (up slightly from 1987). As a result, Taiwan's 1988 agricultural trade deficit reached an all-time high of \$1.8 billion.

Imports of U.S. agricultural products totaled \$2.3 billion, making Taiwan the fourth-largest importer of U.S. agricultural products.

Taiwan's five major categories of imports were logs and lumber, cotton, hides and leather, soybeans, and corn. Bulk imports—corn, wheat, barley, sorghum, and soybeans—make up 22 percent of all agricultural imports. Log imports increased 15 percent, and fruit imports increased 35 percent in 1988. Value-added imports also showed volume and value gains.

Taiwan's wheat import quota will remain at 700,000 metric tons for 1989. Actual import, however, will be about 935,000 metric tons. Imports of turkey surged in late 1987 but stopped in 1988 because of import restrictions.

Taiwan's 1988 agricultural exports of \$3.7 billion were only slightly above the 1987 level. Pork exports, virtually all to Japan, have

been Taiwan's most valuable agricultural export since 1986. In 1988, however, pork export volume fell 22 percent because of sulfa residue problems. Exports of processed fruit and vegetables are declining as their price competitiveness diminishes.

Trade policy and prospects

Authorities are trying to balance the interests of a declining agricultural industry and rural population with demands for trade liberalization by international trading partners.

Tariffs on agricultural imports remain as high as 50 percent of cost, insurance, and freight (c.i.f.) prices. Other import barriers—such as quotas, levies, licensing restrictions, commodity taxes, unique sanitation or purity standards, bans, and guaranteed domestic prices—persist.

Taiwan bans imports of fresh animal offal, animal feet, chicken meat, certain cuts of pork, catfish meat, raw milk and cream, bird eggs, rice, wild rice, fresh potatoes, fresh garlic (banned January through August), red beans, peanuts, peanut oil, melon seeds, sugar, denatured ethyl alcohol of any strength, and processed ginseng products. Quotas are in place on wheat, turkey meat, and some non-U.S. fruit; special levies remain on wheat and milk powder.

Taiwan liberalized import procedures for corn, soybeans, barley, and sorghum in July 1988, but has not liberalized wheat import procedures.

Taiwan continues to provide tariff and nontariff protection for many food and agricultural products as described above, although it has relaxed or announced intentions to relax barriers against crops that Taiwan cannot produce competitively.

Import licenses for certain protected products are valid for one product only, for one shipment only, and for 3 months only. ●

Tanzania

Profile of agriculture

Agriculture dominates the Tanzanian economy, accounting for over 60 percent of the gross domestic product and employing about 85 percent of the population of this East African country.

Cash crops—such as coffee, tea, cotton, cashew nuts, and tobacco—provide the bulk of the country's total exports.

Corn, rice, sorghum, and millet are the main cereal crops, while corn and cassava are the major calorie sources in the Tanzanian diet. Potatoes and bananas also are important food crops.

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Cashew nuts	18	22
Corn	2,200	2,350
Cotton	72	85
Rice	355	420
Sisal	40	41
Tea	14	13
Wheat	70	72

Livestock numbers ¹

	1988	1989
	<i>millions</i>	
Cattle	15.0	N/A
Goats	6.4	N/A
Hogs	0.3	N/A
Sheep	3.1	N/A

N/A = Not available.

¹ Estimates as of January each year.

Although located between the great lakes of the interior—Lake Victoria, Lake Tanganyika, and Lake Nyasa—and the Indian Ocean, nearly two-thirds of the land has almost no agriculture because of a lack of sufficient water and tsetse fly infestation.

Most of the arable land is in the northern and southern highlands, along the coast, and in the western lake region.

Production highlights

The combination of good weather and more effective Government policies has led to a surge in agricultural production in recent years.

The gross domestic product has increased in each of the past 3 years, with the largest gains being achieved in agriculture. Corn output reached a record high in 1988 and cotton production has doubled since 1983. Many other major crops achieved production gains of 20 percent or more between 1986 and 1988.

However, the coffee crop's performance was disappointing in 1988. For the past few years, coffee output has been afflicted by diseases, drought in the Arusha and Kilimanjaro areas, insufficient credit and inputs, and low performance in the nationalized estates.

Tea harvests also have been declining in recent years. The main problems are labor shortages at picking, drought, low rates of fertilizer use, and aging processing factories.



Tanzania at a Glance

Population (1988): 24.0 million

Urban population: 4.5 million

Population growth rate: 3.3%

Per capita income (1988): \$240

Arable land area: 150,000 square kilometers

Major crops: Corn, coffee, tea, rice, cashew nuts, cassava, bananas, potatoes

Livestock sector: Cattle, sheep, goats

Leading agricultural exports:

Coffee, cotton, cashew nuts, tea, tobacco, pyrethrum, sisal

Leading agricultural imports: Rice, vegetable oils, dairy products, wheat

Agricultural imports as share of total imports: 22%

U.S. share of total agricultural imports: 3%

Percent of population in agriculture: 85%

Farm and food policy

Food self-sufficiency has been Tanzania's top goal over the last decade, but more recent objectives have focused on the liberalization of

Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Dairy products	2.3	6.1
Flavoring syrups	1.0	N/A
Rice	3.2	10.6
Soybean oil	1.9	N/A
Wheat flour	5.4	5.4
Total²	15.0	25.0

¹ Values are shown in U.S. dollars at US\$1=129 Tanzanian shillings. Includes commercial and concessional imports.

² Includes products not listed above.

agricultural marketing and providing incentives for export crops. The country's economic recovery program—in which agriculture has the central role—has been supported by loans from the International Monetary Fund (IMF).

The Government has agreed under the IMF accords to currency devaluations, more free-market pricing, privatizing state enterprises, and phasing out subsidies to state corporations.

Implementation of these policies has contributed to higher agricultural production. Producer prices have been increased significantly, marketing has been made more flexible, and the role of private traders and cooperatives has been enhanced.

While cooperatives have taken a larger role in marketing, their rapidly increased responsibilities continue to constrain their operations and strain their liquidity situation.

Full recovery of the Tanzanian economy, however, continues to be hampered by transportation problems, inadequate processing capacity, and declining industrial utilization.

Tanzania faces a tremendous challenge in rehabilitating its agricultural sector and recovering from prolonged economic stagnation. Under the Economic Recovery Program, per capita income has improved from \$213 in 1984 to \$240 in 1988.

Imports and exports

Devaluations of the Tanzanian currency and high interest rates have boosted the prices of imports, thus, limiting commercial food imports.

Although most commodities are still imported by state corporations, the private sector's share is increasing.

The leading farm imports are wheat, rice, vegetable oils, and dairy products.

Tanzanian imports from the United States totaled \$15 million in 1987, including \$7 million in food aid. The leading imports were wheat flour, \$5 million; rice, \$3 million; dairy products, \$2.3 million; soybean oil, \$2 million; and flavoring syrups, \$1 million.

Production of export crops is being encouraged through increased

prices paid to farmers, and there are no longer export taxes on agricultural commodities.

Tanzania's total export earnings have stabilized at around \$350 million the past few years.

Although food production has increased, the output of export crops is still about 10 percent below the 1976-78 base period.

Tanzania's agricultural exports reached \$246 million in 1987. The leading export earners were coffee, \$109 million; cotton, \$44 million; tea, \$18 million; cashew nuts, \$12 million; and tobacco, \$12 million.

The United States imports small quantities of coffee from Tanzania.

Trade policy and prospects

Tanzania's trade policy stems from the basic farm policy of greater market liberalization and incentives for export crops. Since agriculture accounts for about three-fourths of the country's total export earnings, emphasis is being placed in this area.

The Government assists exporters by allowing them to keep a part of their export earnings for buying essential items from a growing list of permissible imports. The Government also allows producer prices to reflect world market conditions and benefit from a series of currency devaluations over the past few years.

A pervasive problem affecting Tanzania's trade position is a rising trade deficit resulting from the need for higher import levels to sustain the rehabilitation of the economy. ●

Thailand

T

Profile of agriculture

About 18 percent of Thailand's workforce of 29.9 million people are employed in agriculture.

Subsistence farming is prevalent in the northeast region and poorer areas of the country. However, most farms in the rest of the country are commercial enterprises, although they are small and privately owned.

Rice is grown on about 60 percent of Thailand's farmland. It is the leading crop in the country followed by cassava, corn, sugarcane, pineapples, rubber, sorghum, cotton, soybeans, and tobacco.

Thai poultry and swine industries are well developed and have experienced sustained growth for the last dozen years or so. Cattle production has shown little change during the same time period.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production ¹		
Cassava	19.55	22.31
Coconuts	1.28	1.31
Corn	4.31	2.78
Molasses	1.21	1.37
Pineapples	1.63	1.51
Rice	18.86	18.04
Sugarcane	24.44	27.18

Livestock numbers ¹

	1987
	<i>millions</i>
Beef cattle	4.97
Dairy cows	0.08
Hogs	4.21
Poultry	84.49
Sheep	95.10

¹ Estimates as of January 1 of each year.

Production highlights

Thailand's agricultural sector shook off a 3-year slump in 1988 to grow 8.4 percent. Better weather and record prices increased income from major crops by nearly 30 percent over 1987.

Growth was slower in livestock and fisheries production. Forestry earnings declined because of reduced reserves and increased restrictions.

Crop production, which had experienced no growth for 2 years, expanded by 11.5 percent in 1988. This growth was led by grains, oilseeds, and sugar. Soybean growers enjoyed record prices and yields, and sugarcane producers had their best year since 1982. Despite some weakness in the tobacco, jute, and coffee markets, farm incomes from major crops rose by 30 percent.

Livestock production in 1988 was constrained by high feed costs, lower poultry exports, and swine disease. However, the fledgling dairy industry increased output by 15 percent and new investment set the stage for stronger growth in the future.

Coastal farming of black tiger shrimp expanded more than twofold to 60,000 tons in 1988. Shrimp production was expected to top 80,000 tons in 1989.

Forestry continued to decline because of reduced supplies, legislation increasing the minimum diameter of wood for logging, and, late in 1988, a total ban on logging due to flood damage.

The outlook for growth in the agricultural sector is positive. However, in the future, gains will depend more on production than prices, which have been holding at near-record levels.



Thailand at a Glance

Population (1988): 54.96 million

Urban population: 9.28 million

Population growth rate: 1.7%

Per capita income (1988): \$1,045

Arable land area: 174,000 square kilometers

Major crops: Rice, cassava, pineapple, rubber, corn, sugar

Livestock sector: Developed poultry and swine industry, growing dairy industry, some beef production

Leading agricultural exports: Rice, tapioca, corn, rubber, sugar, pineapples

Leading agricultural imports: Cotton, soybean meal, tobacco, seafood, wheat

Agricultural imports as share of total imports: 8%

U.S. share of total agricultural imports: 14%

Percent of population in agriculture: 18%

Some reduction in the growth rate of the crop sector is anticipated, while the decline in forestry revenues will continue. The performance of the poultry, swine, and fisheries industries should continue to be strong.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions</i>	
Selected products		
Cotton	78	312
Milk powder	9	110
Soybean meal	36	57
Tobacco	34	34
Wheat	19	39
Total ²	169	1,241

¹ Values are shown in U.S. dollars at US\$1=25.27 baht. Includes commercial and concessional imports.

² Includes products not listed above.

Imports and exports

Thai agricultural imports rose in 1988 by more than 40 percent because of increased demand for seafood, oilseeds, dairy products, and tobacco. Imports of breeding stock rose 23 percent in 1988 to \$30 million.

U.S. agricultural exports to Thailand climbed by 53 percent to \$169 million, but were still less than half of Thai agricultural exports to the United States.

Thailand's textile, tobacco, and livestock industries will continue to need U.S. cotton, tobacco, and livestock genetics. A growing middle-class will increase demand for U.S. grocery and convenience items. The Government's 1988 reduction of tariffs on apples, wheat, and soy isolate will improve the outlook for U.S. sales of these items.

Thai agricultural exports rose by 25 percent to over \$6 billion. Rice led the way. Rice exports totaled \$1.3 billion, 25 percent above the previous record set in 1981.

Higher world prices raised the value of rubber and sugar exports by 30 and 18 percent, respectively.

Tapioca exports rose by 6 percent and earned \$870 million in 1988. Cassava, a source of tapioca, is grown on Thailand's least fertile land by millions of the country's poorest farmers. From a socio-economic standpoint, it is second only to rice as Thailand's most important crop.

The value of sugar exports increased 13 percent as higher world prices offset a 16-percent decline in volume. Exports of coarse grains and beans fell as growing domestic needs outpaced improved supplies.

Trade policy and prospects

Thai agricultural trade policy stresses import substitution and export growth, with the government setting the targets and providing incentives while relying on the private sector's capital and management skills.

However, in a break with this policy in 1988, the Government withdrew most logging concessions after indiscriminate felling caused unprecedented destruction from floods in the southern part of the country.

The Government also broke with policy following the 1987 drought by allowing retail prices for rice to rise by 25 percent with no attempt to stop exports. This reflected a shift away from an urban bias in Government programs.

Producers of cassava are encouraged to export with a Government bonus system. The Government also revised regulations on the construction and operation of new slaughter plants which helped the swine industry increase production and exports in 1988.

Last year saw the successful conclusion of negotiations between the United States and Thailand to reduce the duties on wheat and apples by 57 and 88 percent, respectively. Wheat and apples are the United States' third and fifth largest agricultural exports, respectively, to Thailand.

In the Uruguay Round of the General Agreement on Trade and Tariffs (GATT) negotiations, Thailand is a member of the 13-nation Cairns Group which seeks liberalization of world agricultural trade. ●

Farm and food policy

The Government is trying to maximize agricultural export earnings while at the same time providing low-priced food for the Thai people.

Export taxes, quotas, bilateral trade agreements, price supports, and ceiling prices are being used to accomplish these goals.

Crop diversification and import substitution are main objectives of Thailand's agricultural policy.

The private sector has taken the lead in crop diversification with the Government providing research and other support. Transportation, financing, storage, input supply, and processing are provided by private enterprises.

Irrigation projects have accounted for the largest share of public investment in agriculture since the mid-1970's.

Tunisia

Profile of agriculture

Tunisia has two major agricultural production areas. In the northern and coastal region, which receives adequate rainfall, farms are large, mechanized, and irrigated; they receive the bulk of public expenditures on agriculture. The central and southern region, in contrast, features small farms which have virtually no political power. This area receives assistance from the Food and Agriculture Organization, U.S. aid programs, the World Bank, and similar organizations.

Agriculture contributes 11 percent to Tunisia's gross domestic product. In 1988, the country had 300,000 farms which employed one-third of the Tunisian workforce.

Tunisia's population of 7.7 million is growing at a rate of 2.4 percent per year. The per capita income is nearly \$1,300.

Production highlights

In 1988, Tunisia experienced both its worst drought in years and a

locust invasion. As a result, Tunisia's grain harvest decreased from a record-high of nearly 2 million tons in 1987 to a record-low of 290,000 tons in 1988. Initial estimates put the 1989 grain crop between 500,000 and 1 million tons as dry weather continues.

Milk production grew slightly from 356,000 tons in 1987 to 370,000 tons in 1988. The Government places a high priority on the development of red meat and dairy production, so 1989 production is expected to remain adequate to meet domestic needs. Tunisia remains self-sufficient in broiler and egg production.

In 1988, oil olives continued to be the only oilseeds Tunisia produced in significant quantities. Olive oil production varies greatly from year to year, depending on the amount of rainfall. For 1987 and 1988, Tunisian olive oil output was 80,000 tons—20,000 tons below average. Estimates are that 1989 production also will be 80,000 tons.

The southern oases of Tozeur and Kelbili are major palm date producing regions. Tunisia produced 56,000 tons of palm dates in 1987/88 and 65,000 tons in 1988/89. The increase was mainly due to timely rain and more young palm trees reaching bearing age. Product quality improved as new date-conditioning centers were opened.

Citrus production for 1988/89 is estimated at 260,000 tons, an 11-percent increase over the previous year. The 1988 drought reduced the wine grape harvest from 63,000 tons in 1987 to 35,000 in 1988. As a result, wine production decreased from 450,000 hectoliters in 1987 to 200,000 in 1988. Production of table grapes fell 18 percent in 1988. Almond production fell 35 percent in 1988 as more than 2 million trees were damaged by the drought.

Farm and food policy

Tunisia's Seventh Economic Development Plan (1987-91) outlines



Tunisia at a Glance

Population (1988): 7.7 million

Urban population: 4.0 million

Population growth rate: 2.4%

Per capita income (1988): \$1,300

Arable land area: 16.5 million hectares

Major crops: Cereals, durum wheat, barley, oranges, olives, almonds, dates, wine grapes, vegetables

Livestock sector: Dairy and beef cattle, sheep, poultry, eggs

Leading agricultural exports: Dates, oranges, almonds, olive oil, live animals, wine

Leading agricultural imports: Wheat, milk, poultry, beef, cotton, tobacco, sugar, barley, corn, soybean meal

Agricultural imports as share of total imports: 12.6%

U.S. share of total agricultural imports: 35.7%

Percent of workforce in agriculture: 33%

Agricultural Production		
	1987	1988
	mil. metric tons	
Crop production		
Almonds	0.05	0.03
Barley	0.30	0.06
Cereals	1.90	0.28
Dates	0.06	0.07
Durum wheat	1.07	0.17
Olives	0.57	0.50
Oranges	0.15	0.12
Vegetables	1.60	1.35
Wine grapes	0.06	0.04
	1987	1988
	millions	
Livestock numbers		
Cattle	0.60	0.59
Goats	1.00	1.00
Sheep	5.20	5.00

two priorities for agriculture. The first is to increase production and become self-sufficient in supplying basic food items such as milk, red meat, and cereals. The second is to expand output of products and services for exports such as citrus, palm dates, and olive oil.

In 1988, the Government continued to provide economic incentives to stimulate production of cereals and livestock. Credit allocations to producers were increased and the Government provided free supplies

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Barley	10.75	64.32
Bred heifers	1.35	5.84
Corn	29.02	29.02
Meat	0.00	19.67
Milk	0.00	39.32
Soybean meal	10.57	33.61
Soybean oil	25.83	35.07
Wheat	83.17	204.73
Total²	167.12	980.37

¹ Values are shown in U.S. dollars at US\$1=0.84 dinars. Includes commercial and concessional imports.

² Includes products not listed above.

of cereal seed, herbicides, and fertilizer to about 86,400 farmers. The Government also continued its push to privatize the agricultural sector.

Imports and exports

In 1988, Tunisia imported more than \$980 million worth of agricultural products as a result of its drought-reduced harvests. Major imports included milk, wheat, meat, and live animals.

Depending on the size of its harvest, Tunisia's grain imports during 1989 are likely to reach about 1.3 million tons of wheat, 500,000 tons of barley, and 250,000 tons of corn. In 1988, the United States supplied 85 percent of Tunisian barley imports and nearly 65 percent of wheat imports. The European Community (EC), particularly France and Italy, offer stiff competition.

In 1988, Tunisia imported 30,000 tons of milk powder for reconstitution. Most came from the EC.

In 1988, Tunisia imported about 120,000 tons of soymeal pellets, 43 percent more than 1987. Argentina (43,000 tons), Brazil (28,000 tons), and the United States (21,000 tons) were the major suppliers.

In 1988, Tunisia exported over \$362 million worth of agricultural products. Major exports included olive oil, dates, oranges, and wine.

Olive oil exports provide a major source of export receipts—nearly one-quarter of 1988 earnings. Most go to the EC which allows 46,000 tons of vegetable oil to enter duty-free. The Government also is exploring markets in North America, Africa, and the Middle East.

In 1988, Tunisia exported 43,000 tons of citrus, a 20-percent decline from 1987, due largely to competition from Spain, Portugal, and Morocco. The Government has set an export goal of 80,000 tons for 1989, but intense international competition will make it difficult to reach.

Palm dates are another important export, accounting for export sales of \$33.3 million in 1988. Target markets include North America, the Far East, and Australia. In 1989, Tunisia plans to export about 20,000 tons. However, based on past history and the weather outlook, it is unlikely that this sales goal will be reached.

Almonds rank third among exports after oranges and dates. However, since 1987, almond exports have declined due to lower production and higher domestic prices. In 1988, Tunisia's almond exports were valued at \$570,000, down from \$3.3 million in 1987. France was the major customer, purchasing 46 percent of exports. Better relations with neighboring Libya opened that market, with 1988 exports reaching \$152,000. In 1989, export prospects are weak, due to drought and higher domestic prices.

During 1988, Tunisia's wine exports to the EC were under

quotas. Major EC buyers were West Germany, France and Belgium.

Trade policy and prospects

Tunisia is trying to promote its exports. Government agencies have been created to provide political and commercial risk insurance for exporters and to subsidize freight financing. Barter is important, especially with the Eastern Bloc nations and China.

Tunisia has begun to ease its licensing process for importers. Tunisia's licensing policy allows imports of essential foodstuffs, but curbs nonessentials.

Despite its self-sufficiency goal, continued threat of drought aggravated by possible locust invasions increased Tunisia's dependence on the availability of foreign credit to finance food imports in 1988. The United States remained a major supplier of wheat and corn by offering credit programs and an Export Enhancement Program initiative for wheat.

Tunisia continues to face drought problems in 1989. As a result, the country will rely heavily on imports to meet its basic needs for food and livestock feed. Given Tunisia's mounting external debt services, it will rely on long-term credit (3-7 years) to finance its agricultural imports.

U.S. exports will face strong competition from other suppliers. Competition comes from France for soft wheat; Italy, Turkey, and Mexico for durum wheat; France, Spain, and Argentina for vegetable oils; France and the Netherlands for dairy products and animal semen.

Tunisia enjoys privileged economic ties to the EC. However, the United States will remain a major competitor in bulk commodities (wheat, corn, barley, and grain sorghum), and will have market opportunities for soybean meal and oil, and livestock, especially breeding animals, purebred Holstein cattle, and bull semen. ●

Turkey

Profile of agriculture

The agricultural sector remains a driving force in the Turkish economy. Almost half the country's population works in the agricultural sector. Agricultural production—primarily grains, cotton, tobacco, fruits, and vegetables—contributes more than one-fifth of the gross domestic product. In addition, a significant portion of industry is involved in processing agricultural products.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Apples	1.7	1.9
Barley	6.0	6.5
Corn	2.4	2.0
Cottonseed	1.0	1.2
Filberts	0.3	0.4
Grapes	2.9	2.8
Olives	0.6	1.0
Potatoes	4.1	4.3
Sugar (raw)	1.8	1.6
Wheat	13.0	15.0
	<i>millions</i>	
Livestock numbers ¹		
Cattle		
Beef cattle	4.4	4.3
Dairy cows	5.2	5.0
Poultry	180.0	200.0
Sheep	43.5	42.0

¹ Estimates as of January 1 each year.

Production highlights

Turkey is self-sufficient in food production. Increased use of improved seeds and expanded irrigation, supported by excellent weather, pushed 1988 agricultural output to near-record levels. Real agricultural growth in 1988 was just under 7 percent.

Input costs rose significantly in 1988—fertilizer prices increased by more than 200 percent, while prices of diesel and kerosene, essential for mechanized farming, rose 105 percent.

The year 1988 was a good one for cereals. Production of most grains increased. Wheat and barley production reached record levels of 15 and 6.5 million tons, respectively.

The Government and private sectors had to turn to imports for large quantities of corn and rice. Turkey exported chick peas and lentils, primarily to the Middle East.

The sugar industry found 1988 to be a normal year. Roughly 12 million tons of sugar beets were processed and about 1.6 million tons of sugar (raw basis) were produced.

For the tobacco industry, the introduction of the first locally manufactured American-blend cigarette in the Turkish market was the most significant event of the year.

Regarding cotton, the Government has liberalized exports and imports. As a result, growing exports may cause sharp price increases on the local market and lead industry to seek their needs from foreign suppliers.



Turkey at a Glance

Population (1988): 54.2 million

Urban population: 28.8 million

Population growth rate: 2.5%

Per capita income (1986): \$1,120

Arable land area: 231,238 square kilometers

Major crops: Cotton, tobacco, cereals, sugar beets, fruits, nuts, livestock products, pulses

Livestock sector: Beef and dairy cattle, sheep, poultry, goats

Leading agricultural exports: Cotton, tobacco, fruits, nuts, livestock products, pulses

Leading agricultural imports: Vegetable oil, cigarettes, hides and skins, wood and wood products, wool, breeding cattle

Agricultural imports as share of total imports: 7%

U.S. share of total agricultural imports: 31%

Percent of population in agriculture: 47%

Farm and food policy

Turkey's priority for agriculture has been to achieve self-sufficiency in agricultural output and produce for export. Since the mid-1980's,

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Breeding animals	8	34
Cigarettes	162	169
Corn	19	19
Cotton	11	49
Hides and skins	2	125
Rice	15	27
Tallow	17	18
Vegetable oil	36	187
Wood and products	27	131
Wool	0	96
Total²	310	1,000

¹ Values are shown in U.S. dollars at US\$1 = 1,899.96 lire. Includes commercial and concessional imports.

² Includes products not listed above.

Turkey has been shifting from exporting raw agricultural products to exporting processed items. These efforts to put added value in Turkey's agricultural exports have seen a commensurate decline in the country's shipments of raw commodities.

Although the Government is taking some steps to liberalize

foreign trade and is considering privatization of some state-run establishments, domestic industry and agriculture in Turkey are still protected.

The Government continues to devote special attention to improvement of land and water resources, and expansion of irrigation. Roughly two-thirds of total public investment is targeted toward this goal. The government also encourages use of high-yielding seed varieties.

Budget constraints in 1988 prevented completion of all of the programmed irrigation projects. Government development programs continue to give priority to infrastructural investments.

Imports and exports

Turkish agricultural imports in 1988 totaled \$1 billion, primarily vegetable oil (\$187 million), cigarettes (\$169 million), hides and skins (\$125 million), wood and wood products (\$131 million), and wool (\$96 million).

The Government's grain agency did not want to import any wheat in 1988. The agency was interested in importing only barley for the feed industry. However, Turkish wheat purchases (not actual imports) from the 1988 crop did not reach the expected level and 200,000 tons of wheat had to be imported, 150,000 from Yugoslavia and South Africa, and 50,000 tons from the United

States under the Export Enhancement Program and export credit guarantee programs. By the end of the year, Turkey had exported some barley rather than importing it.

Turkey's agricultural exports in 1988 reached \$2.4 billion. A wide-ranging market basket of horticultural products accounted for almost one-third of this amount and included filberts, raisins, citrus, tomato paste, dried apricots, pistachio nuts, and dried figs. Other major exports included pulses (\$371 million), tobacco (\$266 million), livestock and products (\$258 million), and cotton (\$151 million).

Trade policy and prospects

Turkey's policy is to trade with all countries, with emphasis on the EC, the Eastern Bloc, the Middle East, and the Arab countries. Yet the policy is so open that North and South America, the Near East, and the Far East also are included.

By having a flexible trade policy, Turkey's overall exports rose from \$5 billion in 1982 to \$11.7 billion in 1988. In spite of these increases, Turkey continues to run a sizable trade deficit. The deficit probably will continue at least through the next few years. On the other hand, agricultural trade is in surplus, and is likely to remain so at least for the mid-term. ●

United Kingdom

Profile of agriculture

Agriculture in the United Kingdom (U.K.), which encompasses England, Scotland, Wales, and Northern Ireland, is intensive, highly mechanized, and efficient by European standards. However, it produces only about 62 percent of Britain's food requirements because of climatic factors. Roughly 2.3 percent of the country's population is engaged in farming. Livestock, grain, and dairy farming account for the greater part of production.

Production highlights

U.K. agriculture has endured 2 successive years of difficult conditions—political, economic, and climatic. The main thrust of the U.K.'s attitude toward the European Community's Common Agricultural

Policy (CAP) is a gradual introduction and strengthening of market forces and a reduction of support and restrictive market management.

Guaranteed prices have been frozen, effectively reducing them in real terms. The tightening of intervention arrangements and livestock premium payments is beginning to take effect. At the same time, the U.K. has suffered two unfavorable years of weather that have cut production.

Net agricultural production in 1988 fell by 11 percent in real terms so that British farmers saw lower production accompanied by lower prices against a background of rising costs. Net farm income in 1988 fell 25 percent from the previous year, the lowest since 1985.

Unfavorable weather cut production of cereals and oilseed crops in 1988. The wet, cool summer of 1988 cut grain output, particularly of barley, for the second year in a row. Total grain production was down 3 percent from 1987 and 14 percent from 1986 due to reduced yields and slight area reductions.

Rapeseed yields also declined in 1988. The U.K. is now using the maximum amount possible of single-low-derived rapeseed meal in animal feed. Most rape is now of double-low varieties.

There is growing interest in growing pulses, particularly field beans, for animal feed, but technical problems with tannin content need to be surmounted before field bean production can be expanded further. This illustrates the limited scope for the substitution of new and/or different crops within the U.K.'s traditional farming pattern.

Unfavorable weather for cereals in 1988 helped boost root crop production, particularly of potatoes and sugar.

In the livestock sector, the major feature over the past 3 years has been the effects of EC milk quotas on both dairy and beef production. U.K. beef production in 1988



United Kingdom at a Glance

Population (1988): 56.9 million

Urban population: 44 million

Population growth rate: 0.16%

Per capita income (1986): \$9,800

Arable land area: 71,000 square kilometers

Major crops: Wheat, barley, sugar, potatoes, rapeseed

Livestock sector: Cattle, sheep, pigs, poultry

Leading agricultural exports: Livestock, barley, wheat

Leading agricultural imports: Fruits and vegetables, meat and meat preparations, beer and wine, cereals, dairy products, coffee, tea, cocoa

Agricultural imports as a share of total imports: 11%

U.S. share of total agricultural imports: 5%

Percent of population in agriculture: 2.3%

slumped 14 percent from 1987. The success of the dairy quota system, however, has meant that milk production over the past 3 years has fallen 8 percent, with an almost-too-successful achievement of a sharp decline in production of dairy products, particularly butter and skim milk powder.

Pork production in 1988 saw its third consecutive year of growth. Although pigs and poultry receive less support from the CAP than do other parts of the livestock industry, they have benefited from buoyant demand and, in 1986 and 1987,

Agricultural Production

	1986/87	1987/88
	<i>mil. metric tons</i>	
Crop production ¹		
Barley	10.01	9.23
Mixed grain	0.03	0.03
Oats	0.51	0.45
Potatoes	6.45	6.76
Rapeseed	0.97	1.33
Rye	0.03	0.03
Sugar (raw)	1.43	1.34
Wheat	13.91	11.94

	1988
	<i>millions</i>
Livestock numbers ²	
Cattle	
Beef cows	1.60
Dairy cows	3.52
Chickens	122.05
Hogs	8.00
Sheep and lambs	41.00
Turkeys	8.30

¹ Crop years are July-June.

² Based on latest livestock survey, June 1988.

Value of Agricultural Imports, July-June 1987/88

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Animal feed	73.5	557.7
Beer and wine	14.3	987.9
Fruits, vegetables	130.2	2,462.4
Meats and preps.	30.0	1,646.3
Oilseeds	114.3	227.5
Tobacco	35.8	325.7
Total²	584	11,471

¹ Values are shown in U.S. dollars at US\$1=0.55 pounds. Includes commercial and concessional imports.

² Includes products not listed above.

relatively stable feed costs. In 1988, however, the North American drought meant higher feed costs, and it is likely that pork production will fall slightly in 1989.

The major expansion in the livestock sector in 1988 was in the sheep industry. However, tightening of CAP finances and changes in the premium system could lead to some cutbacks in sheep production in 1989 and subsequent years.

Farm and food policy

Recent developments in the EC's agricultural policy, coupled with the U.K. government's reduction in public expenditures, has caused a significant turnaround in the goals of British agricultural policy.

EC budgetary constraints have begun to make inroads in reducing CAP surpluses, the costs of supporting them, and of subsidizing their export. The United Kingdom has played a principal role in pushing through changes in the emphasis of the EC's support policies.

Domestically, the EC now has shifted its stance on the promotion of national self-sufficiency in agricultural products. The large number of domestic schemes for helping farmers are being rearranged so that they will no longer provide a platform for the advancement of agricultural production.

In general, the degrees of self-sufficiency in many products are liable to decline slightly or hold steady during the next few years. In 1988, self-sufficiency in indigenous food and feed declined slightly from the previous 2 years.

The theme of future agricultural policy is a farming economy based on less reliance and support, greater exposure to market forces, and farm income derived to a greater extent from alternative enterprises.

Imports and exports

The United Kingdom always runs a significant deficit in its agricultural trade balance. The year 1988 was no exception. Agricultural exports declined; agricultural imports increased slightly. The EC continued to dominate the U.K.'s agricultural import picture, particularly for items where the variable levy system severely hampers imports from third countries. Meats, dairy products, and grains are particularly EC-dominated for this reason. In 1988, the EC provided 62 percent of the U.K.'s agricultural imports, the United States, 5 percent.

Overall, import demand increased for meats and meat preparations, dairy products, cereals, fruits, vegetables, and sugar. Imports of beer and wine increased markedly. On the other hand, imports of some nonfood raw materials declined, particularly hides and skins, tobacco, oilseeds, and animal and vegetable oils and fats.

The pattern of imports from the United States showed a further shift away from bulk items such as cereals, animal feed, and textile fibers, and an increase in imports of

high-value products such as fruits, vegetables, wine, and beer.

Higher imports of U.S. tobacco and oilseeds reflected the enhanced competitiveness of the United States because of the weak dollar.

Regarding U.K. agricultural exports, most major commodity shipments were down in 1988. U.K. exports of wheat plunged 47 percent to 1.9 million tons. Barley shipments fell 10 percent to 2.8 million tons. Sugar exports fell 12 percent to 282,000 tons, although shipments to the EC rose 70 percent.

U.K. cattle shipments fell to 260,202 head in 1988 from 378,260 a year earlier. Almost all the animals were destined for the EC. Sheep exports, again almost entirely to the EC, rose 36 percent to just over 508,000 head. Swine exports in 1988 were down only slightly to 59,000 head.

Trade policy and prospects

Agricultural trade issues are coming increasingly to the fore as the single European market in 1992 approaches. As a member of the EC, the United Kingdom will follow EC law. Should the EC move toward a less stringent veterinary and plant health regime than is practiced in the U.K., there could be problems for the U.K., such as the obligation to import animals, meat, and poultry from continental EC countries where foot-and-mouth disease, hog cholera, rabies, and other diseases may pose a threat to the British livestock sector and its exports. ●

Uruguay

Profile of agriculture

Uruguay has a population of almost 3 million people. Although the country is 85 percent urban, agriculture makes up 11 percent of the gross domestic product, employs

11 percent of the workforce, and accounts for 56 percent of the country's exports.

The main crops are wheat, rice, corn, and sorghum. Uruguay is self-sufficient in most basic foodstuffs.

Production highlights

In the 1988/89 summer, Uruguay was hit by a severe drought coupled with high temperatures. The hot, dry summer followed a cold, dry winter of 1988 in which there was three times more frost than normal. Below-normal rainfall could seriously threaten 1989 crop production.

During 1988, Uruguay's agricultural production held close to 1987's level, with increased output of grains, oilseeds, and beef offsetting a significant reduction in sugarcane and beet crops.

Production of beef and mutton during 1988 increased significantly and beef prices decreased by about 20 percent. Domestic consumption of beef remained close to the 1987 level while beef exports rose sharply.

Wool production fell about 10 percent due to severe weather, including drought and frosts, which not only increased the mortality rate within sheep flocks but also significantly reduced the livestock carrying



Uruguay at a Glance

Population (1988): 2.9 million

Urban Population: 2.5 million

Population growth rate: 0.4%

Per capita income: \$2,330

Arable land area: 13,889 square kilometers

Major crops: Wheat, corn, rice, sorghum

Livestock sector: Beef cattle, sheep

Leading agricultural exports: Beef, leather, wool, rice, dairy products

Leading agricultural imports: Wheat, corn, barley, cotton

Agricultural imports as share of total imports: 10%

U.S. share of total agricultural imports: 3.6%

Percent of population in agriculture: 11%

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Oilseeds	117	142
Potatoes	142	140
Rice	335	381
Sweet potatoes	60	60
Sugarcane	600	450
Wheat	308	390

	1987	1988
	<i>millions</i>	
Livestock numbers		
Beef cattle	9.9	10.4
Sheep	25.7	26.4

	1988
	<i>thous. metric tons</i>
Animal products	
Beef and veal	301
Eggs ¹	457
Mutton and lamb	60
Pork	9
Wool	87

¹ Million.

Value of Agricultural Imports January-October 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ thousands¹</i>	
Selected products		
Bull semen	187	216
Cattle	37	77
Corn	275	1,878
Cotton	275	6,642
Total²	831	21,411

¹ Values are shown in U.S. dollars at \$US1=619 new Uruguayan pesos. Includes commercial and concessional imports.

² Includes products not listed above.

capacity of the ranges. These weather problems contributed to a reduction in the amount of fleece per shorn animal.

Total output of grains and oilseeds increased with wheat, rice, and soybeans showing significant

gains. The 1988-89 wheat crop was estimated at 390,000 tons, with the quality of the crop reported excellent.

Imports and exports

Total imports of agricultural products into Uruguay in 1988 totaled \$140 million, below 1987 primarily because of a sharp drop in grain imports.

The value of agricultural exports increased substantially during 1988 to total \$983 million.

The Government has mounted an aggressive drive to expand and diversify exports. Uruguay's main export markets are Brazil and the United States. Trade promotion and tariff reduction agreements have been signed with Argentina and Brazil, ties with Western Europe are being strengthened, and new markets such as Africa, the Middle East, and Asia are being developed.

Exports of soybeans, grains, tobacco, wool, beef, and mutton posted big gains and were able to offset losses in edible oils, dairy products, poultry and eggs, and oilseed products.

Projected wheat exports for 1989 total nearly 50,000 tons. The Government controls wheat imports and exports and has import taxes on some oilseed products.

The export outlook for 1989 is expected to improve even further. Gains are expected for beef, wool, and rice. Citrus, and more recently soybeans, are becoming important export commodities. However, the outlook for improved exports could dim if the drought which occurred in early 1989 hurts crop yields.

Trade policy and prospects

While the Government maintains agricultural trade policies consistent with a relatively free market, some commodities such as beef, leather, and sugar continue to be heavily protected.

In 1986, the Punta del Este resort was the site of the conference that initiated the current round of negotiations in the General Agreement on Tariffs and Trade (GATT), and Uruguay takes an active role in promoting the effort to maintain and expand an open world trade system. ●

Venezuela

Profile of agriculture

About 30 percent of Venezuela's land area (roughly 95 million hectares) has potential for agricultural use; however, only about 2.3 million hectares is under cultivation and another 12 million is devoted to pastures. The average farm size is 80 hectares. Roughly 15 percent of the population works in agriculture.

Production highlights

Production of the most important crops in the country—corn, rice, sesame, and sugar—all appear to have declined in 1988.

Corn and sorghum production have remained stagnant for the past few years for several reasons. First, the Government's price increases, which favored corn and sorghum producers, have been eroded by higher machinery and labor costs. Second, yields have not improved.

Although fertilizer use has increased, much seems to be wasted or mis-used.

In addition, the Government has restricted seed imports in favor of domestically produced seed, which have been reported as below standard and in short supply. Finally, bad weather—primarily poorly timed rainfall—has resulted in poor germination and substantial reseed-ing.

As a result, domestic corn production barely covered the country's traditional food needs in 1988, while sorghum production required record imports to meet the feed industry's requirements.

Rice has been largely ignored by the Government's food policy. Since rice was in surplus during the early 1980's the Government support for rice has lagged behind other crops. Low prices, inadequate credits, and poor maintenance of irrigation systems during 1988 were enough to discourage rice farmers and cause imports to replace exhausted in-country stocks.

Despite government policies designed to curb imports and shift consumption to locally produced corn and rice, wheat continued as the most important food grain in 1988. Wheat's No. 1 position was due to two factors: First, the Government's import subsidies made prices of wheat products cheaper than those of other grain products. Second, supplies of imported wheat were more reliable than those of domestically produced grains.

Output of coffee and cocoa, the two traditional export crops, continued to decline in 1988, as low prices and job opportunities in other sectors have discouraged producers.

Sugar remained as one of the crops favored by the Government's policy of self-sufficiency. Higher producer prices, increased production credits, and the subsidy on fertilizers contributed to production gains in 1984-86. However, output in 1988 was below the industry's target



Venezuela at a Glance

Population (1988): 18.7 million

Urban population: 14.6 million

Population growth rate: 2.8%

Per capita income (1988): \$2,080

Arable land area: 2.3 million hectares

Major crops: Sugar, corn, rice, sorghum, cocoa, coffee

Livestock sector: Hogs, cattle, poultry

Leading agricultural exports: Coffee, cocoa and cocoa cake, cigarettes, plantains, mangoes

Leading agricultural imports: Wheat, whole dry milk, vegetable oil, grain sorghum, soybeans and soy oil, dairy cows, beans, malting barley, sunflower oil

Agricultural imports as share of total imports: 9%

U.S. share of total agricultural imports: 52%

Percent of population in agriculture: 14.5%

and left a 26-percent deficit to be made up by imports.

Venezuela has historically been dependent on imports for 80 to 90 percent of its edible vegetable oils. Consequently, the domestic oilseeds sector has been favored by three different Government actions. First, in 1984, the Government raised producer prices substantially, in some cases by 100 percent in one year.

Second, at the same time, it instituted a package of subsidies to

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Cereals	2,418.1	2,484.8
Coffee	71.2	71.0
Cocoa	12.6	13.6
Fruits	2,293.7	2,441.2
Oilseeds		
and textiles	323.6	358.2
Pulses	48.9	50.4
Roots and tubers	642.6	670.9
Sugarcane	8,035.9	8,332.5
Tobacco	16.2	15.3
Vegetables	359.0	384.8

	1987	1988
	<i>thousands</i>	
Livestock numbers		
Broilers ¹	227.0	250.8
Cattle	1,743.4	1,798.2
Hogs	2,510.2	2,546.7

¹ Million head.

Value of Agricultural Imports, 1988

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Beans	13.5	33.8
Sorghum	175.4	175.4
Barley malt	0.2	37.6
Soybean cake and meal	236.0	252.1
Sugar	2.6	66.7
Sunflowerseed oil	18.4	43.3
Wheat	88.8	184.2
Whiskey	2.3	44.0
Whole dry milk	N/A	201.7
Total²	749.1	1,448.1

¹ Values are shown in U.S. dollars at US\$1=14 50 bolivar. Includes commercial and concessional imports.

² Includes products not listed above.

all agricultural producers, including cheap credits, tax breaks, and low-priced fertilizers. Third, in 1986, it linked processors' import shares to their support for domestic production.

Despite the large sums invested in oilseed production during the past four years, the country's self-sufficiency has improved only by about 5 percent. Imports continue to provide nearly three-quarters of the country's vegetable oil and meal. Given the increase in population and food needs, this proportion seems unlikely to improve more in the next few years.

Livestock producers have been pressuring the Government for higher prices because of steady increases in production costs. However, the Government took no action to raise prices in 1988, with the result that price-regulated beef

cuts disappeared from butchers' shops, while prices for pork products, live cattle, hides, and tallow increased more than 50 percent in 1988.

The price hikes on beef helped hog producers as consumers shifted to cheaper meats, particularly sausages and wieners. Meatpackers fought a bidding war among themselves keep their lines running, with prices rising significantly over the official Government price.

Farm and food policy

Venezuela's agricultural policy is undergoing major changes. Due to its large budget deficit, the Government can no longer support the level of subsidies of the previous administration. For farmers, this means that 1989 will be a tough year. Given the reduction in subsidies and the current difficulties in obtaining farm credits, total agricultural output is likely to fall, perhaps as much as 10 to 15 percent.

Just what Government subsidies will be curtailed or eliminated remains to be seen. The initial plan was "shock treatment": to remove subsidies and to open the economy to market forces in the shortest possible time.

The disturbances that rocked the country in late February 1989—when food prices shot up abruptly and more than 1,000 food stores were looted—have led the Government to reconsider its plans.

Its task will be to balance its agricultural price policy against the social consequences for higher prices.

Imports and exports

Venezuela has long been a net importer of agricultural products. During the past few years, its imports have averaged around \$1.2 billion, while its exports have averaged around \$200 million.

The largest proportion of imports are of bulk commodities,

particularly wheat, feed grains (currently all sorghum), soybean meal, and vegetable oils. The United States is the major supplier, with a traditional market share of about 50 percent. The United States has been favored by its geographic closeness to Venezuela (a 7-day voyage from the U.S. Gulf ports), as well as the long, close relationships between U.S. and Venezuelan agribusinesses.

The outlook for 1989 is for a drop in U.S. shipments. Although the prospect of smaller domestic crops and continued growth in population would suggest a greater need for imports, it seems unlikely that this need will be translated into stronger demand. Sharply higher prices for food in Venezuela are likely to depress consumption of higher priced foods, including wheat products and animal proteins.

Trade policy and prospects

The Government has replaced the multiple exchange rate system with a single floating rate initially set at the prevailing free market rate. This resulted in an immediate 170-percent devaluation of the official rate in March 1989, although the Venezuelan currency, the bolivar, has strengthened slightly since then.

The Government allocates foreign exchange according to supply and demand, with the Central Bank of Venezuela setting reference prices and intervening in the market only to keep the exchange rate within a desirable range of fluctuation.

Although the government promised a more liberal trading system with the new tariff schedule published in mid-1989, many of the old trade barriers, such as prior licensing and outright bans, continue in force for many agricultural products. Since Venezuela has just applied for membership in the GATT, the ultimate extent of liberalization is uncertain. ●

Yugoslavia

Profile of agriculture

Agriculture contributes about 10 percent of the Yugoslav gross national product and employs about 20 percent of the labor force.

About two-thirds of the agricultural production comes from the private sector. Private farmers hold 83 percent of the arable land and comprise over 90 percent of the agricultural labor force.

The maximum size of a private farm is 10 hectares, but the average is only 3.2 hectares, with as many as nine separate plots. Consequently, productivity is low.

The socialized sector numbers over 2,700 vertically integrated conglomerates, known as kombinats, which are self-managed enterprises and not state-owned. They are required to operate at a profit, but they do receive subsidies for certain inputs and unprofitable lines of production.

The socialized sector is mainly involved in large-scale production of grains, oilseeds, sugar beets, hogs, and poultry. The more labor-intensive products are left to the private sector.

Production highlights

For the second consecutive year, a disastrous drought spoiled Yugoslavia's agricultural performance with ramifications throughout the economy.

Agricultural output fell 4 percent in 1988 from the sharply reduced 1987 total as drought cut production of major field crops, fruits, vegetables, and grapes. The bright spot was the record wheat crop which escaped the summer heat.

Spring-planted crops were hard hit. Output of corn, the main crop, was the lowest since 1978.

Other major crops—sunflowers, soybeans, and sugar beets—also suffered significant production decreases.

With the exception of wheat, the country's crop production—reflecting both reduced acreage and lower yields—suffered sharp declines. Corn was down by 13 percent, oilseeds by 20 percent, and sugar beets by 28 percent.

Repercussions were also felt in the livestock sector, where all categories of animals are below year-earlier levels. This reflects the tenuous situation in livestock production as producers, with high input costs and declining sales due to inflation, trimmed herds and flocks.



Yugoslavia at a Glance

Population (1985): 23.4 million

Urban population: 10.4 million

Population growth rate: 0.7%

Per capita income (1988): \$3,280

Arable land area: 14.3 million hectares

Major crops: Corn, wheat, sunflowers, soybeans, sugar beets, fruits

Livestock sector: Swine, poultry, cattle, sheep, horses

Leading agricultural exports: Fruits and vegetables, livestock products, corn, wine, and tobacco

Leading agricultural imports: Coffee, cotton, wool, soybeans and meal, wheat, hides and skins, tropical fruits

Agricultural imports as share of total imports: 9%

U.S. share of total agricultural imports: 14%

Percent of population in agriculture: 19%

Yugoslavia's 1988 grain output, estimated at 15 million tons, was about the same as the poor 1987 harvest. However, drought reduced corn production to only 7.7 million tons.

However, the wheat crop, enjoying good weather during the growing season and harvest, rose 19 percent above 1987's level to a record 6.3 million tons.

Agricultural Production

	1987	1988
	<i>mil. metric tons</i>	
Crop production		
Corn	8.9	7.7
Potatoes	2.2	1.9
Soybeans	0.2	0.2
Sugar beets	6.2	4.5
Sunflowers	0.5	0.4
Wheat	5.3	6.3

	1988	1989
	<i>millions</i>	
Livestock numbers ¹		
Cattle	4.9	4.7
Hogs	8.3	7.4
Poultry	78.6	75.1
Sheep	7.8	7.6

	1987	1988
	<i>thous. metric tons</i>	
Livestock products		
Beef, veal	317	301
Milk	4,890	4,777
Mutton, lamb	65	70
Pork	871	855
Poultry	323	328

¹ Estimates as of January 15 each year.



Value of Agricultural Imports, 1987

	<i>Imports from</i>	
	<i>United States</i>	<i>All suppliers</i>
	<i>\$ millions¹</i>	
Selected products		
Corn	0	31
Cotton	5	159
Fruits, vegetables	0	121
Hides, skins	3	35
Soybeans	51	54
Soybean meal	21	39
Total²	178	1,243

¹ Values are shown in U.S. dollars at US\$1=737 dinars. Includes commercial and concessional imports.

² Total includes products not listed above.

Total oilseed production slumped from 811,000 tons in 1987 to an estimated 648,000 tons in 1988. Sunflowers accounted for about 60 percent of the output, followed in importance by soybeans and rapeseed. All three suffered sharp declines.

Yugoslavia's oilseed production is seen rebounding in 1989, assuming more normal weather. Liberalization of vegetable oil prices, which enables crushing plants to pay more competitive prices to oilseed producers, also should contribute to increased output.

The sugar beet harvest, due to the combination of the drought and reduced area, slipped to an estimated 4.5 million tons versus 6.2 million in 1987.

Yugoslavia's overall agricultural performance, given better weather in 1989, is likely to improve following 2 years of below-par performance.

Farm and food policy

Yugoslav agricultural producers continue to face financial problems stemming from the country's difficult economic situation, extremely high inflation rate, and reduced buying power of consumers.

The Government's package of economic measures, announced in May 1988, is aimed at stabilizing the economy and turning the country toward a free market. This direction is expected to boost agricultural performance over the long term.

Nonetheless, these measures tended to dampen agricultural production in 1988 through a restricted monetary policy and the implementation of real interest rates on credit.

Imports and exports

The record wheat crop and the poorest corn crop in a decade have resulted in a reversal of the usual trade roles for these commodities.

Normally an importer of wheat and an exporter of corn, Yugoslavia exported over 1 million tons of wheat, and is expected to import around 100,000 tons of corn to maintain adequate feed supplies.

As a result of the expected downturn in the 1989 wheat crop, Yugoslavia will need to import at least 100,000 tons of wheat during 1989/90, with most probably coming from the United States.

The one-fifth drop in oilseed production necessitated increased imports during the 1988/89 marketing year. Soybean requirements are placed at an estimated 300,000 tons, compared to 240,000 in 1987/88. Because of increased bean imports, soybean meal imports should decline.

Although domestic demand for red meats has been trending downward, Yugoslav exports of livestock and meat products were at a record level in 1988 with sales of \$434 million, a 4-percent increase over 1987.

Italy was the largest market with purchases valued at \$130 million. Sales to the United States, the second largest, consisted mainly of canned pork products.

U.S.-Yugoslav agricultural trade continues to favor the United States. U.S. agricultural exports amounted to \$178 million while U.S. imports of Yugoslav farm goods were valued at \$59 million.

Although U.S. wheat sales were only 12,000 tons of durum in the wake of Yugoslavia's record harvest, U.S. agricultural exports were bolstered by expanded sales of soybeans and meal, cotton, and hides and skins.

Trade policy and prospects

The Government's decision to liberalize imports for some agricultural commodities and the establishment of a foreign exchange market to improve access to foreign exchange should boost the processing industries' ability to import over the long run, but poor dinar liquidity will be an initial impediment.

The poor cash liquidity of the processing industry, however, has generated considerable interest in the U.S. export credit guarantee programs for purchasing cotton, soybeans, and hides and skins.

Improved sales of U.S. cotton and hides and skins to Yugoslavia in 1988 reflected a resurgence in the use of U.S. credit guarantees, which almost doubled the year-earlier level. ●

Zambia

Profile of agriculture

Zambia is the most urbanized country in sub-Saharan Africa. Only about half of the 7.6 million people live in rural areas where farming is the primary means of livelihood. Zambia has, however, excellent potential for cultivation of a variety of crops and livestock, and agriculture is growing gradually.

About 75 percent of all farms are small, 2-hectare operations. They produce about half of the corn and the bulk of the oilseeds, while large-scale commercial farmers produce the other 50 percent of these crops. The small rural population must produce a big surplus to supply the large urban population.

Production highlights

Zambia's most important crops are corn, cotton, and tobacco. Buoyed by ample rainfall, high

yields, and larger plantings, Zambia's production in 1988/89 increased for most crops.

Corn accounts for over 95 percent of all grain produced in Zambia and is the staple crop of the Zambian people. The 1988/89 crop year provided a bumper corn harvest of 1.9 million metric tons, a 70-percent increase over 1987/88.

Bad weather and insufficient fertilizer supply, caused by transport problems and inaccessible roads, are expected to decrease corn production to a more normal level of 1.7 million tons for 1989/90. Corn meal yields increased sharply in 1987 and continued the trend through 1988.

Wheat production grew from about 10,000 tons in 1984 to 35,000 tons in 1988/89. Government crop estimates show rice production should rise from 9,000 tons in 1988/89 to 11,000 tons in 1989/90.

In other staple grains, small-scale farmers grow finger millet and pearl millet as subsistence crops. Total millet production for 1988/89 is estimated at 22,500 tons.

Peanut production fell in 1989 to below 28,000 tons, while vegetable oil production increased only marginally.

Soybeans are growing in popularity with small-scale farmers as well as with commercial farmers who use them as both a cash crop and for on-farm feeding of livestock and poultry. Smallholder production doubled from 3,000 tons to 6,000 in 1988/89, and the overall harvest was 32,000 tons.

Cotton production increased to about 64,000 tons in 1988/89, and cottonseed oil was estimated at 3,000 tons. Meanwhile, the tobacco crop hit a record high for this decade with a total of 3.7 million kilograms.

Sugar production rose 26,000 tons between 1986 and 1989. Commercial farmers now grow



Zambia at a Glance

Population (1988): 7.6 million

Urban population: 3.8 million

Population growth rate: 3.5%

Per capita income (1988): \$361

Arable land area: 51,870 square kilometers

Major crops: Corn, cotton, tobacco

Livestock sector: Beef, dairy products, poultry, sheep and goats, swine

Leading agricultural exports:
Coffee, horticultural products, peanuts, sugar, tobacco

Leading agricultural imports:
Tallow, vegetable oil

Percent of labor force in agriculture: 85%

coffee and production is at 580 tons, an upward swing from the 500 tons produced in 1987/88. The tea crop is estimated at 550 tons.

Livestock accounts for about 15 percent of total agricultural production. In 1987, the national herd was estimated at 2.7 million head.

Chickens are raised by almost every rural household in Zambia as a basic food item. Estimates put poultry meat production at 14,400 tons, and egg production at 228 million.

As part of its program to diversify crops, the Government encourages cashew nut production. About 550,000 trees were planted in

Agricultural Production

	1987/88	1988/89
	<i>mil. metric tons</i>	
Crop production ¹		
Corn	1.1	1.9
Cotton	0.03	0.06
Millet	0.01	0.02
Rice	0.01	0.01
Soybeans	0.02	0.03
Wheat	0.04	0.04

	<i>1987</i>
	<i>millions</i>
Livestock numbers	
Beef cattle	0.084
Hogs	0.016
Poultry	0.014
Sheep	0.062

¹ Crop years are July-June.

Value of Agricultural Imports, 1988

Selected products	Imports from
	United States
	\$ millions ¹
Vegetable oil	3.2
Tallow	2.0
Wheat	2.4

¹ Values are shown in U.S. dollars at US\$1=8 kwachas. Includes commercial and concessional imports.

1988/89 and 1.5 million are targeted for the end of 1993.

Farm and food policy

With such a large urban population and the need for a larger agricultural sector, the Government is trying to provide adequate incentives to encourage people to move into agriculture and agricultural businesses. However, thus far, it has not been able to cut down on migration to the cities.

The Government hopes to broaden the land area under irrigation in order to make farming more modern and profitable. About half the currently irrigated area belongs to large-scale farmers.

Recognizing its need to expand and diversify domestic food production, the Government turned its priorities from the traditional dependence on copper, cobalt, zinc, and lead and now looks to improving agriculture by providing incentives to farmers for subsistence and cash crops through pricing and reforms. Official producer prices for corn, wheat, and oilseeds have fallen behind inflation, but some private

traders and processors are paying higher for wheat and oilseeds.

Zambia's new 5-year development program targeted for 1989 to 1994, is the Government's effort to achieve self-sufficiency, a theme which recently has characterized its economic agenda. Agriculture is the program's highest priority, followed by mining, manufacturing, and tourism.

Agricultural objectives of the 5-year program include higher self-sufficiency for staple foods at the household, community, and national levels; expanding exports; improving rural incomes; developing a national irrigation program; and balancing production targets with population growth.

To achieve its objective, the Government plans to strengthen support programs such as extension services, research, credit and input supplies, and to assist new farmers by making high quality seed more available.

Both small and commercial farmers responded to the new atmosphere and Government attention. As a result, more area is under production for most crops.

Imports and exports

Zambia imports mining equipment and spare parts from the United States, but agricultural imports are confined mostly to concessional sales of wheat, tallow, and vegetable oil under the Food for Peace (P.L. 480) assistance program. U.S. exporters also sell a small amount of livestock genetics and carbonated beverages to Zambia.

Meanwhile, other countries are scaling back their assistance programs, with the hope that future domestic production will make Zambia independent in agricultural commodities. Although imports still will be needed to meet demand for

the next several years, foreign exchange constraints will limit Zambia's ability to purchase foods.

On the other hand, Zambia's exports of tobacco to the United States were 4.5 tons in 1987 and 7.5 tons in 1988. The Government wants to bolster exports of cashews, coffee, corn, horticultural products, livestock products, molasses, tobacco, and tea.

Horticultural exports, including roses, have increased about 150 percent in the last 2 years as part of the Government's diversification scheme. Zambia exports beef cattle to Zimbabwe, Botswana, and Mozambique.

Because Zambians drink little coffee, it is exported mostly to West Germany or Switzerland. Sugar exports were projected at 25,000 tons for 1989, and 22,000 tons of molasses were exported.

Zambian peanuts are a confectionery variety which are exported to neighboring countries and Europe. Peanut exports were projected at 11,000 tons for 1989/90.

Trade policy and prospects

The Zambian export market remains restricted by lack of adequate road and rail transportation. As a landlocked country, Zambia depends on external transportation routes through Zimbabwe and Botswana and ports in Mozambique and South Africa.

Nevertheless, the Government encourages exports by allowing nontraditional commodity exporters to retain 50 percent of their foreign exchange earnings to meet costs. Zambian farmers receive a relatively low rate of return on exports, but some farmers are willing to absorb losses in order to have better future access to foreign markets. ●

Zimbabwe

Profile of agriculture

Agriculture is the backbone of the Zimbabwean economy. Zimbabwe has relative economic and political stability and a high degree of food self-reliance. It is a middle-income country, with agriculture accounting for about 15 percent of gross domestic product.

Zimbabwe has a small, modern agricultural sector and a large communal sector.

The most important agricultural commodities are beef, milk, corn,

wheat, cotton, soybeans, peanuts, and tobacco. Corn is the most important food crop.

Varied ecological conditions allow Zimbabwe to grow a wide variety of crops. However, about three-quarters of the country is dry and best suited to livestock. Cattle provide draft power as well as meat in the communal sector. Irrigation is fairly well developed for growing winter wheat and supplementing rain-fed crops.

Farm sector performance was the main reason for Zimbabwe's 6-percent economic growth in 1988. The disposable income of all sectors of the agricultural industry increased.

Production highlights

There was a marked increase in agricultural production in marketing year 1988/89, following good rains in the 1987/88 summer. In most cases, production levels exceeded those achieved in 1986/87, the last good season. The only significant decline in production was registered by flue-cured tobacco, following an exceptional yield in 1987/88.

Cattle slaughter dropped 16 percent in 1988. Because of the dry summer of 1986/87, producers slaughtered more cattle than normal in order to conserve grazing. A similar trend is expected with sheep. However, increased exports are the reason pig producers have increased their slaughter.

Milk production has tended to level out. The dairy marketing board has a surplus of whole milk and is trying to introduce a two-tier producer pricing system to curtail production.



Zimbabwe at a Glance

Population (1988): 9.7 million

Population growth rate: 3.74%

Per capita income (1988): \$540

Arable land area: 27,066 square kilometers

Major crops: Corn, tobacco, sunflowerseed, cotton, wheat, sorghum, soybeans, tea, sugar

Livestock sector: Cattle, sheep, pigs

Leading agricultural exports:

Tobacco, cotton, meat, sugar

Leading agricultural imports:

Wheat

Agricultural imports as share of total imports: Negligible

Percent of population in agriculture: 74%

Farm and food policy

Major policy objectives are to provide adequate returns to producers, encourage food self-sufficiency, maintain low consumer food prices, and promote export earnings. The approach has been to preserve the productivity of commercial agriculture while improving performance of the communal sector.

In the early 1980's, problems associated with the global recession and the African drought led Zimbabwe to undertake an adjustment

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Coffee	11.6	12.8
Corn	1202.2	2253.1
Cotton	232.8	319.1
Peanuts	65.3	135.3
Sorghum	97.7	175.8
Soybeans	101.2	120.4
Sunflowerseed	32.5	64.7
Tobacco	131.4	123.6
Wheat	248.3	255.6
	1987	
	<i>millions</i>	
Livestock numbers ¹		
Beef cattle	1.66	
Dairy cows	0.12	
Hogs	0.20	
Poultry	24.00	
Sheep	0.50	
¹ Estimates as of July each year.		

¹ Estimates as of July each year.

program to reduce the budget deficit, limit short-term external debt and domestic credit, and restrict wage and salary increases. However, this adjustment program compounded difficulties in achieving longer term goals related to employment, training, research, and reducing the income gap between commercial and communal farming.

The agricultural marketing authority coordinates operations of the grain, cotton, and dairy marketing boards and of the cold storage commission. The marketing authority promotes efficient marketing of all controlled or regulated agricultural commodities and advises the Government on commodity prices, including marketing guarantees and subsidies.

Government commodity marketing boards control production and trade. Substantial subsidies are required for corn, beef and dairy products. The Government has sought to reduce production of corn and milk because of unprofitable surpluses.

The Government recommends consumer selling prices with the primary concern of keeping consumer prices low. The Grain Marketing Board also oversees capital improvement for bulk handling and storage facilities.

The Government is continuing efforts to reduce food subsidies by gradually increasing consumer prices.

The rate of increase of input costs has declined over the last 3 years. Efforts by farmers' organizations to have excise duties and sales taxes reduced have met with some success.

Large-scale commercial farmers obtain most of their financing from commercial banks, while small farmers use the Government's Agricultural Finance Corporation. Although 1988 was an above-average year for agriculture, borrowing by commercial farmers increased by 25 percent.

Farm equipment is a serious problem. Tractors, combines, pickup trucks and motorbikes all are in short supply. Spare parts for farm machinery are becoming increasingly difficult to obtain due to the reductions in foreign currency allocations, the depreciating Zimbabwe dollar, and the age of the tractor fleet.

Very little foreign currency is allocated directly to agriculture. The suppliers of inputs to the agricultural industry are allocated foreign currency as part of the Government's Export Promotion Program.

A Government plan to resettle 160,000 families on land purchased from the commercial sector includes options relating to individual arable land allocations, communal grazing areas, village settlements, cooperative farming, communal living, and central core estates providing farmer services. Expected income targets, credit, and extension services are also provided.

Imports and exports

Due to foreign exchange constraints, agricultural imports are minimal with the exception of wheat.

Although cereal production has grown in recent years, annual population growth of over 3 percent has caused per capita cereal production to decline almost 2 percent per year.

A marginal overall increase in agricultural exports was recorded in 1987. The decision by the Government to raise the producer price of peanuts to a level nearer to the international market price has produced a dramatic increase in export earnings for the small quantity exported. Corn seed is also showing significant increases in export earnings.

Export earnings during 1988 were expected to increase, following the improved rains of 1987/88. However, a shortage of locomotives and freight cars might have prevented the full export potential from being achieved.

Trade policy and prospects

Zimbabwe's greatest barrier to imports is its acute shortage of foreign currency. Zimbabwe also has various nontariff barriers to trade. For example, all imported agricultural products are subject to licensing requirements. Although Zimbabwe does not have a year-round quota system, it restricts certain agricultural products on a seasonal basis. In addition, most agricultural products and processed foods require special import permits.

Zimbabwe imposes an import surtax of 12.5 percent—down from 20 percent. The country collects a sales tax of 18 or 23 percent (corresponding to the sales tax on domestic commodities) on imported products.

Barter has been important in the export marketing of tobacco.●

Atlas of World Agriculture

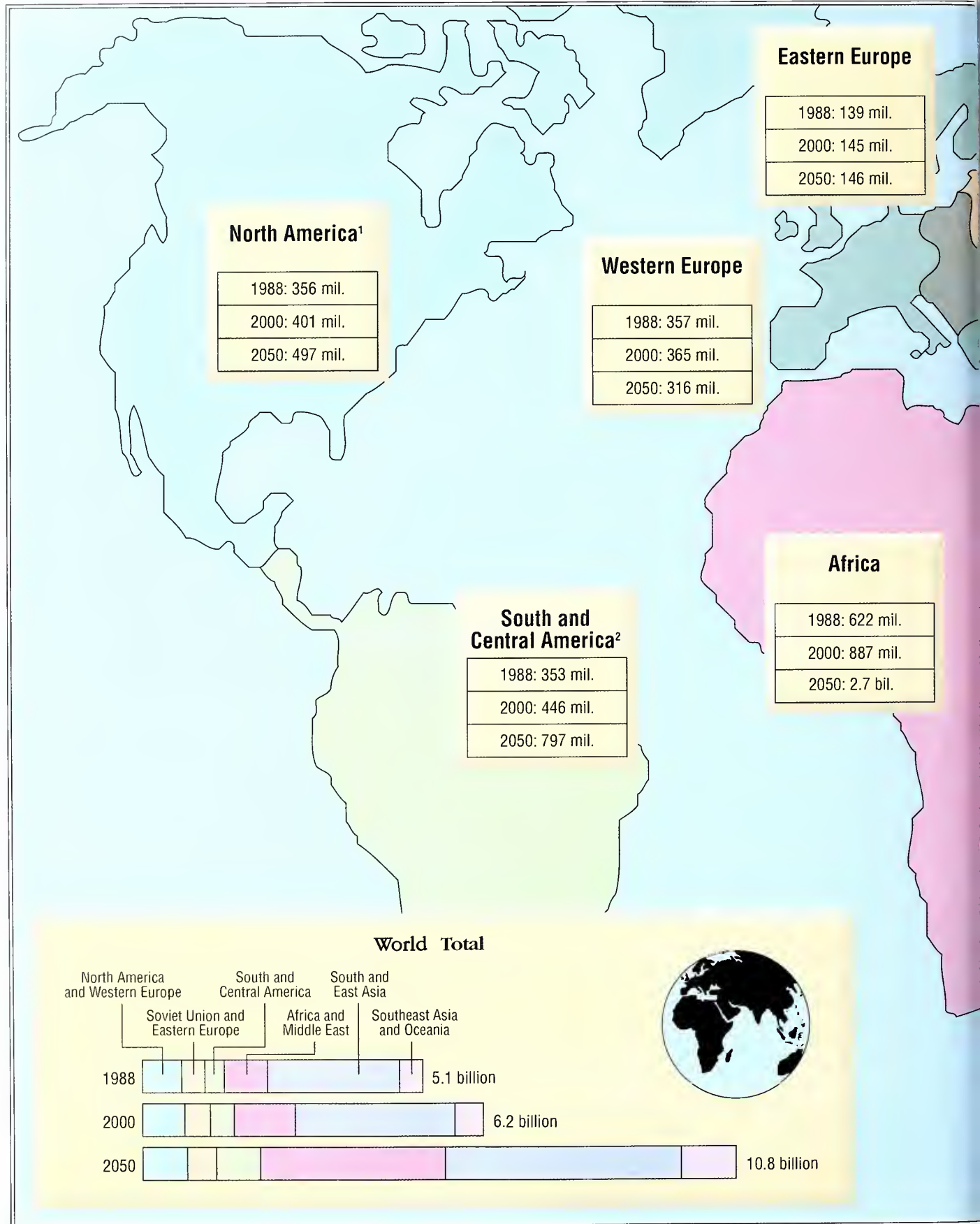


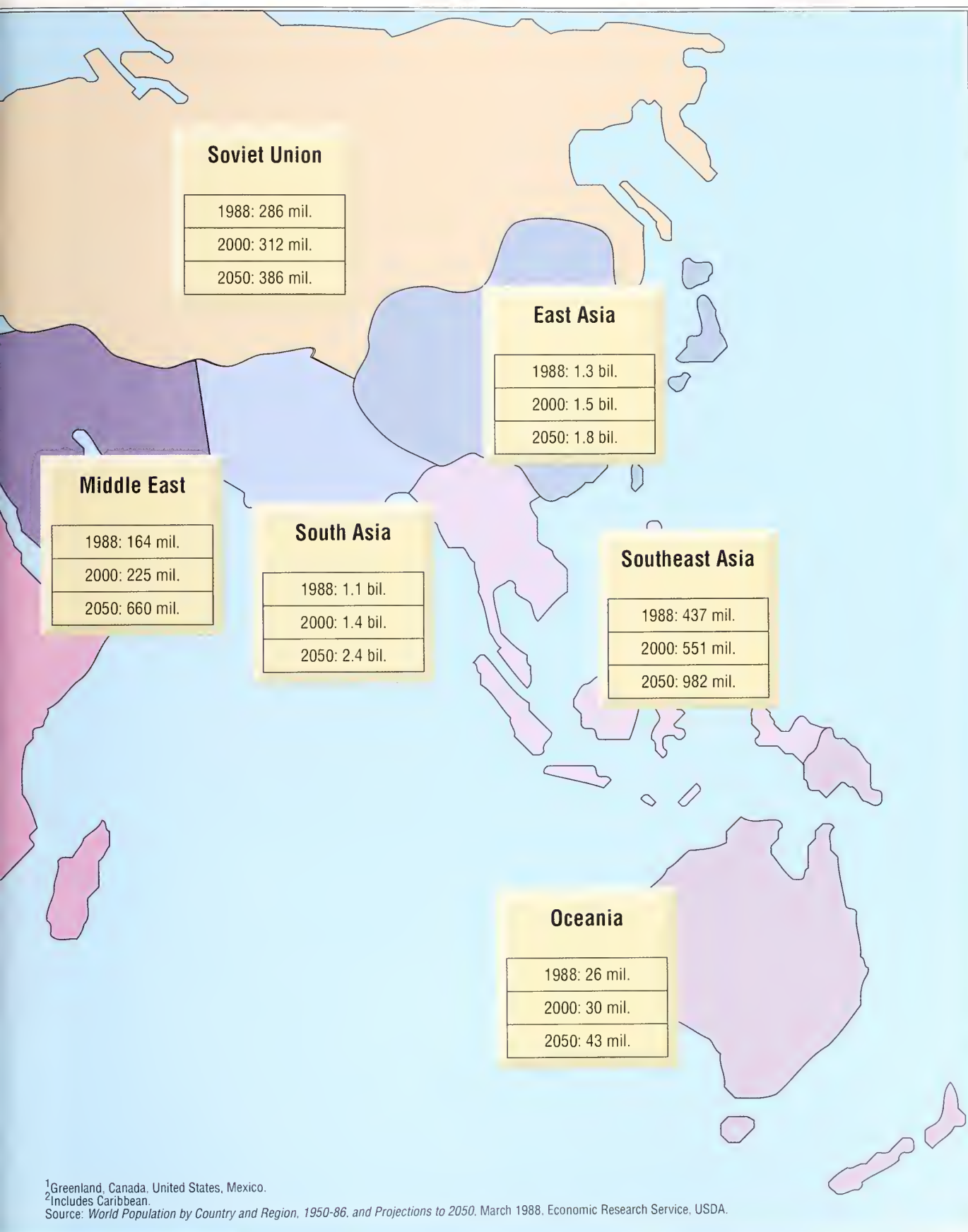
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The following section is intended as a visual guide to world agriculture. Every effort was made to obtain accurate, complete, and up-to-date information. However, because of differences among data sources and the lack of reliable statistics on many countries, the reader may find some inconsistencies and omissions. Boundary representations on the maps are not necessarily authoritative, and inclusion of disputed boundaries does not imply official U.S. recognition. The maps identified by a copyright symbol are reprinted from *Goode's World Atlas* and may not be reproduced without permission from Rand McNally & Company.

World Population Projections by Region



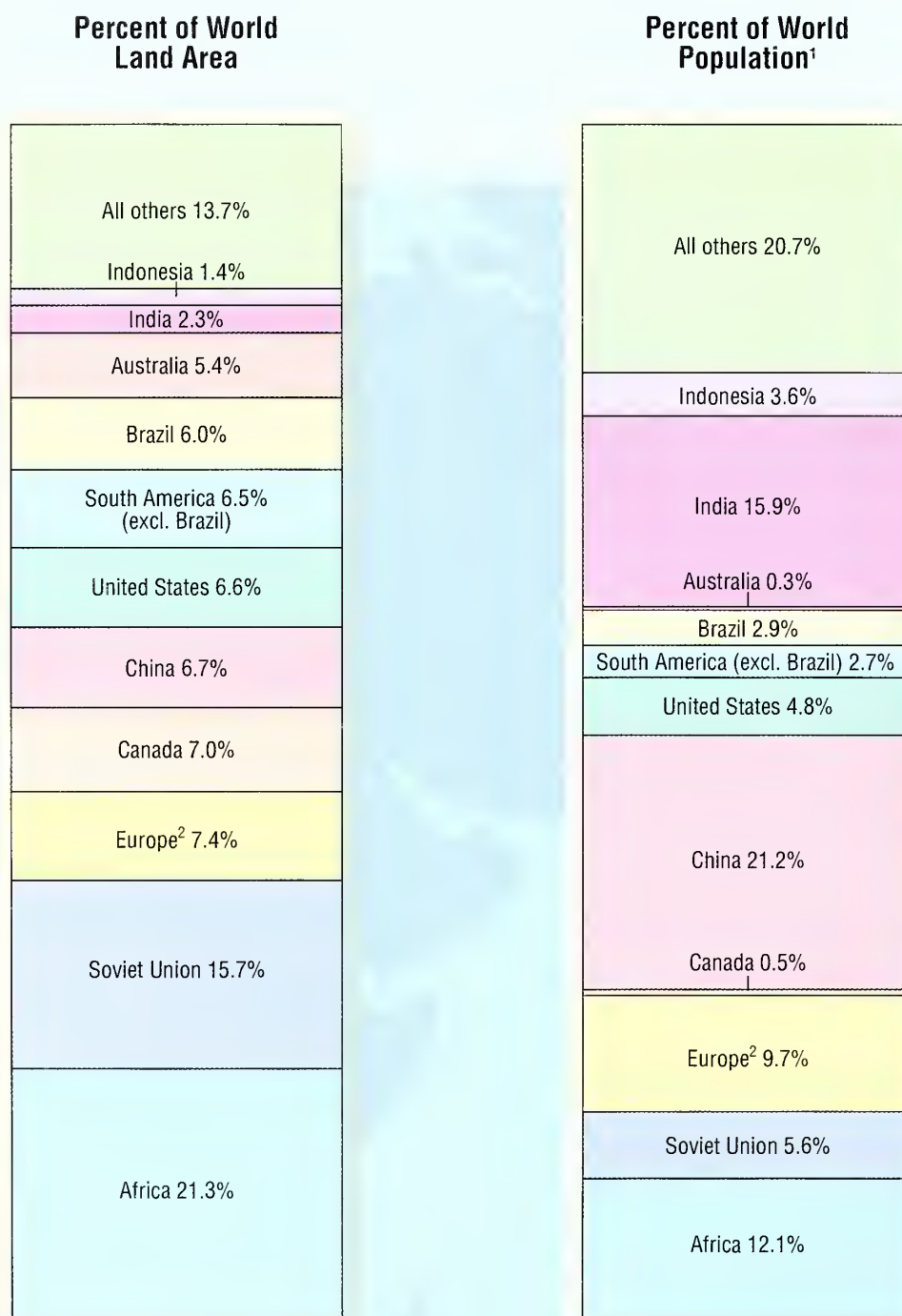


¹Greenland, Canada, United States, Mexico.

²Includes Caribbean.

Source: *World Population by Country and Region, 1950-86, and Projections to 2050*, March 1988, Economic Research Service, USDA.

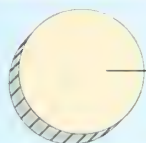
Comparisons of Land Areas and Populations



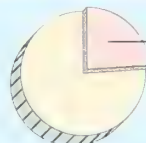
¹Based on 1988 population estimates.
²Includes Western and Eastern Europe.

Per Capita Expenditures on Food, Beverages, and Tobacco as a Percentage of Total Personal Consumption Expenditures

Estimated averages for selected countries

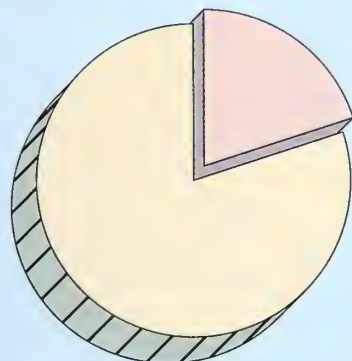


Total personal consumption expenditures per capita



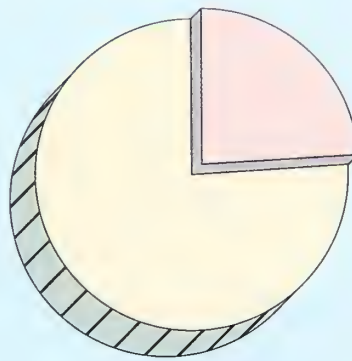
Share spent on food, beverages, and tobacco

Less than 20%



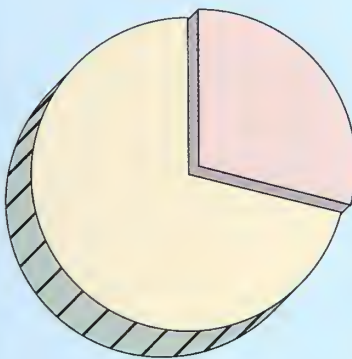
United States 14%
Canada 17%
Netherlands 19%
United Kingdom 19%
Hong Kong 19%

20%–24%



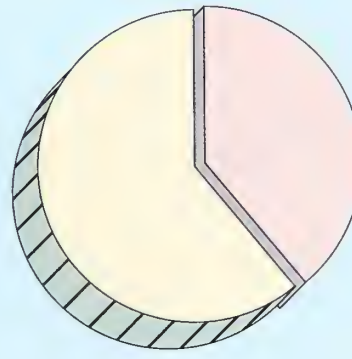
France 21%
Belgium 21%
Japan 22%
Australia 23%
West Germany 23%
Austria 23%
Denmark 24%
Sweden 24%
Luxembourg 24%

25%–29%



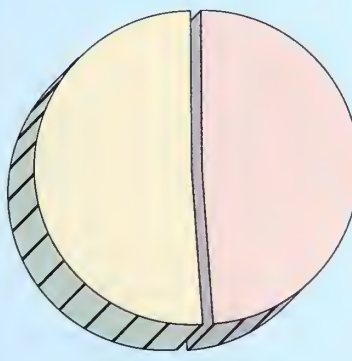
Italy 25%
Norway 25%
Finland 25%
Iceland 26%
Switzerland 28%
Singapore 28%
Puerto Rico 29%
Spain 29%

30%–39%



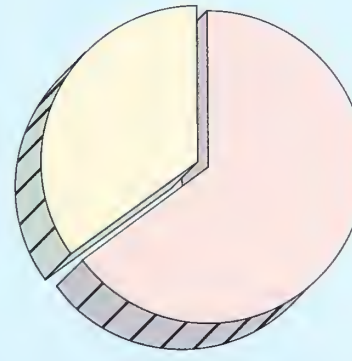
Israel 31%
South Africa 36%
Mexico 37%
Colombia 37%
Cyprus 37%
Ecuador 38%
Portugal 38%

40%–49%



USSR 40%
Jordan 40%
Malta 41%
Greece 42%
Ireland 44%
South Korea 44%
Thailand 45%
Honduras 45%
Iran 49%

50% or more



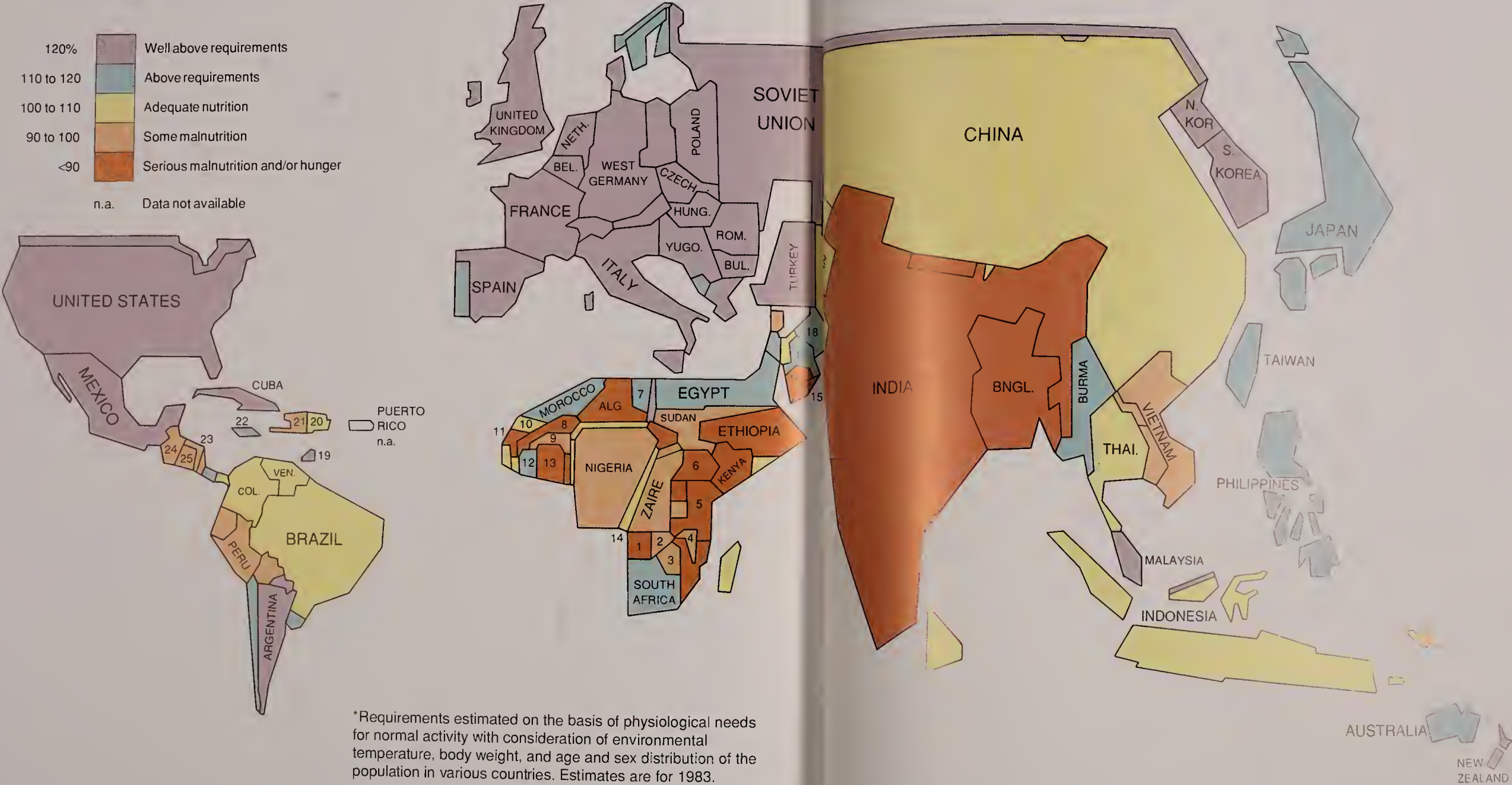
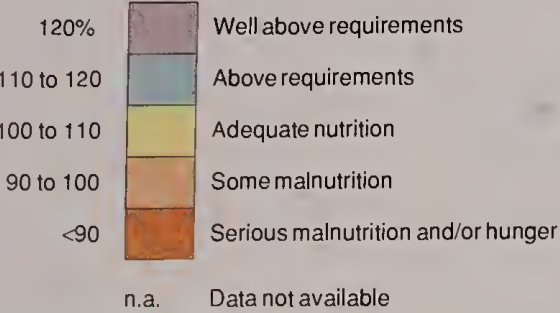
Jamaica 50%
Venezuela 53%
Sri Lanka 53%
China 54%
Philippines 56%
India 58%
Sudan 65%
Sierra Leone 65%

Most data are for 1986, except Luxembourg (1985), Iceland (1983), Ireland (1985), Cyprus (1985), Colombia (1983), Mexico (1984), Portugal (1981), Jordan (1985), Sierra Leone (1985), and Sudan (1983). Data do not include expenditures on food and beverages for away-from-home consumption.
Source: Penni Korb, Economic Research Service, USDA, from United Nations' statistics.

Nutritional Levels Based on Per Capita Calorie Supply

Note: Size of each country is proportional to population

Calorie supply per capita
(percentage of requirements*)



*Requirements estimated on the basis of physiological needs for normal activity with consideration of environmental temperature, body weight, and age and sex distribution of the population in various countries. Estimates are for 1983.

- | | | | | |
|-------------|-----------------|------------------|--------------------|-----------------|
| 1. ANGOLA | 6. UGANDA | 11. GUINEA | 16. YEMEN | 21. HAITI |
| 2. ZAMBIA | 7. TUNISIA | 12. IVORY COAST | 17. SAUDI ARABIA | 22. JAMAICA |
| 3. ZIMBABWE | 8. MALI | 13. GHANA | 18. IRAQ | 23. HONDURAS |
| 4. MALAWI | 9. BURKINA FASO | 14. CAMEROON | 19. TRIN. & TOBAGO | 24. GUATEMALA |
| 5. TANZANIA | 10. SENEGAL | 15. P.D.R. YEMEN | 20. DOM. REPUBLIC | 25. EL SALVADOR |

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Major Agricultural Regions Around the World



Key Harvest Periods for Corn and Soybeans



Mexico and Central America

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

U.S. and Canada

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN	Greece	
JUL	Greece, Spain	Italy
AUG	Greece, Spain	Italy
SEP		Italy
OCT		
NOV		
DEC		

South America

	Corn	Soybeans
JAN		
FEB		
MAR	South	
APR	South	
MAY	South	
JUN	South	
JUL		
AUG	North	
SEP	North	
OCT	North	
NOV	North	
DEC		

Central and Southern Africa

	Corn	Soybeans
JAN		
FEB		
MAR		
APR	Southern	
MAY	Southern	
JUN	Southern	
JUL		
AUG		
SEP	Central	
OCT	Central	
NOV	Central	
DEC	Central	

User Guide

Region	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		




Harvest in geographic area(s) specified

General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.






Eastern Europe

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		Yugoslavia
AUG		Yugoslavia
SEP		
OCT		
NOV		
DEC		

USSR

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP	India	China
OCT	India	China, India
NOV	India	
DEC	India	






North Africa and Middle East

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL	Morocco	
AUG	Morocco, Turkey	
SEP	Morocco, Turkey	
OCT	Morocco	
NOV		
DEC		




Southeast Asia

Corn Soybeans

JAN	Philippines	
FEB	Philippines	
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC	Philippines	

Australia and New Zealand

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Wheat



Mexico and Central America

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

User Guide

Region	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

General harvest period for entire region

U.S. and Canada

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY	Greece, Spain, Italy	
JUN	Greece, Spain, Italy	Italy
JUL		Italy, France
AUG		Italy, France, Ireland
SEP	Ireland	Italy, Ireland
OCT		Ireland
NOV		
DEC		

South America

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Central and Southern Africa





	Winter Wheat	Spring Wheat
JAN	South	
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		South
NOV		South
DEC	South	

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		Hungary
AUG		Poland
SEP		Poland
OCT		
NOV		
DEC		




USSR

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR	India	
APR	India	
MAY	India, China	
JUN	India, China	
JUL	India	China
AUG		China
SEP		
OCT		
NOV		
DEC		

North Africa and Middle East

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Southeast Asia

	Winter Wheat	Spring Wheat
JAN	Burma	
FEB	Burma	
MAR	Burma	
APR	Burma	
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Australia and New Zealand

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Rice and Cotton



Mexico and Central America

	Rice	Cotton
JAN		Central America
FEB		Central America
MAR		Central America
APR		
MAY		
JUN		
JUL		
AUG		Mexico
SEP		Mexico
OCT		Mexico
NOV		
DEC		

U.S. and Canada

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		Greece, Spain
OCT		Greece, Spain
NOV		Greece, Spain
DEC		

South America

	Rice	Cotton
JAN		Colombia, NE Brazil
FEB		Colombia, S. Brazil, Argen.
MAR	South	Colombia, S. Brazil, Argen.
APR	South	S. Brazil, Argentina
MAY	South	S. Brazil, Argentina
JUN	South	Argentina
JUL		
AUG		NE Brazil
SEP	North	NE Brazil
OCT	North	NE Brazil
NOV	North	NE Brazil
DEC	North	Colombia, NE Brazil

Central and Southern Africa

	Rice	Cotton
JAN		West Africa, Sudan, Kenya
FEB		West Africa, Sudan, Kenya
MAR		West Africa, Sudan, Kenya
APR		Southern Africa, Kenya
MAY		Southern Africa, Tanzania
JUN		Southern Africa, Tanzania
JUL		Southern Africa, Kenya, Tanzania
AUG		Southern Africa, Kenya
SEP	Central	Kenya
OCT	Central	West Africa, Kenya
NOV	Central	West Africa, Sudan, Kenya
DEC	Central	West Africa, Sudan, Kenya

User Guide



Region	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified




General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

USSR

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Rice	Cotton
JAN	India	India, Pakistan
FEB		India, Pakistan
MAR	India	India
APR	India	
MAY	India	
JUN		
JUL	China, Bangladesh	
AUG	China, Bangladesh	
SEP	China, India	China
OCT	China, India	China, India
NOV	China, India	China, India, Pakistan
DEC	India	India, Pakistan







North Africa and Middle East

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL	Morocco	
AUG	Morocco	
SEP		Egypt, Syria, Turkey
OCT		Egypt, Syria, Turkey
NOV		Syria, Turkey
DEC		Syria, Turkey

Southeast Asia

	Rice ¹	Cotton
JAN	North	
FEB	North	
MAR	South	
APR	South	
MAY	South	
JUN	South	
JUL		
AUG		
SEP	North	
OCT	North	
NOV	North	
DEC	North	

Australia and New Zealand

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

¹ Minor harvests all year.

Key Harvest Periods for Sugar



Mexico and Central America

	Cane Sugar	Beet Sugar
JAN	Costa Rica, Mexico, Cuba, Guatemala	
FEB	Costa Rica, Mexico, Cuba, Guatemala	
MAR	Costa Rica, Mexico, Cuba, Guatemala	
APR	Mexico, Cuba, Guatemala	
MAY	Mexico, Cuba	
JUN	Mexico, Cuba	
JUL	Mexico	
AUG	Mexico	
SEP		
OCT	Costa Rica	
NOV	Costa Rica, Mexico	
DEC	Costa Rica, Mexico, Guatemala	

U.S. and Canada

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		California
AUG		California
SEP		
OCT		
NOV		
DEC		

Western Europe

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR	Spain	
MAY	Spain	
JUN	Spain	
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South America

	Cane Sugar	Beet Sugar
JAN	Venezuela, Colombia	
FEB	Venezuela, Colombia	
MAR	Venezuela, Colombia	Chile
APR	Venezuela, Colombia	Chile
MAY	Venezuela, Colombia	Chile
JUN	Venezuela, Colombia, So. Brazil	Chile
JUL	Venezuela, Colombia, So. Brazil	Chile
AUG	Venezuela, Brazil	Chile
SEP	Venezuela, Brazil, Colombia	Chile
OCT	Venezuela, NE Brazil, Colombia	
NOV	Venezuela, NE Brazil, Colombia	
DEC	Venezuela, NE Brazil, Colombia	

Central and Southern Africa

	Cane Sugar	Beet Sugar
JAN	Egypt, Ethiopia	
FEB	Egypt, Ethiopia	
MAR	Egypt, Ethiopia	
APR	Egypt, Ethiopia	
MAY	Southern Africa, Egypt, Ethiopia	
JUN	Southern Africa, Egypt, Ethiopia	
JUL	Southern Africa, Ethiopia	
AUG	Southern Africa, Ethiopia	
SEP	Southern Africa, Ethiopia	
OCT	Southern Africa, Ethiopia	
NOV	Southern Africa, Ethiopia	
DEC	Southern Africa, Egypt, Ethiopia	

User Guide

Region	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified






General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

USSR

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Cane Sugar	Beet Sugar
JAN	China, India, Bangladesh, Japan	China, Japan
FEB	China, India, Bangladesh, Japan	Japan
MAR	China, India, Bangladesh	
APR	China, Bangladesh	
MAY	China	
JUN	China	
JUL	China	
AUG	China	
SEP	China	China
OCT	China, Japan, Bangladesh	China, Japan
NOV	China, India, Bang., Japan	China, Japan
DEC	China, India, Bang., Japan	China, Japan









North Africa and Middle East

	Cane Sugar	Beet Sugar
JAN	Turkey	Turkey
FEB	Turkey	Turkey
MAR		
APR		
MAY		
JUN		North Africa
JUL		North Africa
AUG	Turkey	N. Africa, Turkey
SEP	Turkey	N. Africa, Turkey
OCT	Turkey	N. Africa, Turkey
NOV	Turkey	N. Africa, Turkey
DEC	Turkey	Turkey

Southeast Asia

	Cane Sugar	Beet Sugar
JAN	Thailand, Philippines	
FEB	Thailand, Philippines	
MAR	Thailand, Philippines	
APR	Thailand, Indo., Philippines	
MAY	Thailand, Indo., Philippines	
JUN	Indonesia, Philippines	
JUL	Indonesia, Philippines	
AUG	Indonesia, Philippines	
SEP	Indonesia, Philippines	
OCT	Indonesia, Philippines	
NOV	Thailand, Indo., Philippines	
DEC	Thailand, Indo., Philippines	

Australia and New Zealand

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Coffee and Citrus

Mexico and Central America

	Coffee	Citrus
JAN	Guat., Costa Rica, Mexico	Mexico
FEB	Guat., Costa Rica, Mexico	Mexico
MAR	Guat., Costa Rica, Mexico	Mexico
APR		Mexico
MAY		Mexico
JUN		
JUL		
AUG	Guatemala	
SEP	Guatemala, Costa Rica	Mexico
OCT	Guatemala, Costa Rica	Mexico
NOV	Guat., Costa Rica, Mexico	Mexico
DEC	Guat., Costa Rica, Mexico	Mexico

User Guide

Region	Coffee	Citrus
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

U.S. and Canada

	Coffee	Citrus ¹
JAN		Calif., Ariz., Texas, Fl.
FEB		Calif., Ariz., Texas, Fl.
MAR		Calif., Ariz., Texas, Fl.
APR		Calif., Ariz., Florida
MAY		California, Florida
JUN		California, Florida
JUL		California
AUG		California
SEP		California
OCT		California
NOV		Calif., Ariz., Texas
DEC		Calif., Ariz., Texas, Fl.

¹Harvest periods shown are for oranges.

Western Europe

	Coffee	Citrus
JAN		Mediterranean
FEB		Mediterranean
MAR		Mediterranean
APR		Mediterranean
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		Mediterranean

South America

	Coffee	Citrus ¹
JAN	Venezuela	
FEB		
MAR	Colombia	
APR	Colombia, Brazil	Brazil
MAY	Colombia, Brazil	Brazil
JUN	Brazil	Brazil
JUL	Brazil	Brazil
AUG	Brazil	Brazil
SEP	Brazil	Brazil
OCT	Venezuela	Brazil
NOV	Venezuela	Brazil
DEC	Venezuela	Brazil

¹Harvest periods shown are for oranges.

Central and Southern Africa

	Coffee	Citrus
JAN	Cote d'Ivoire, Ethiopia, Tanz.	
FEB	Cote d'Ivoire, Tanzania	
MAR	Cote d'Ivoire, Tanzania	
APR	Cote d'Ivoire	
MAY		
JUN		
JUL		
AUG		
SEP		
OCT	Cote d'Ivoire	
NOV	Cote d'Ivoire, Ethiopia, Tanz.	
DEC	Cote d'Ivoire, Ethiopia, Tanz.	

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

North Africa and Middle East

	Coffee	Citrus
JAN		Northwest Africa
FEB		Northwest Africa
MAR		Northwest Africa
APR		Northwest Africa
MAY		Northwest Africa
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		Northwest Africa
DEC		Northwest Africa

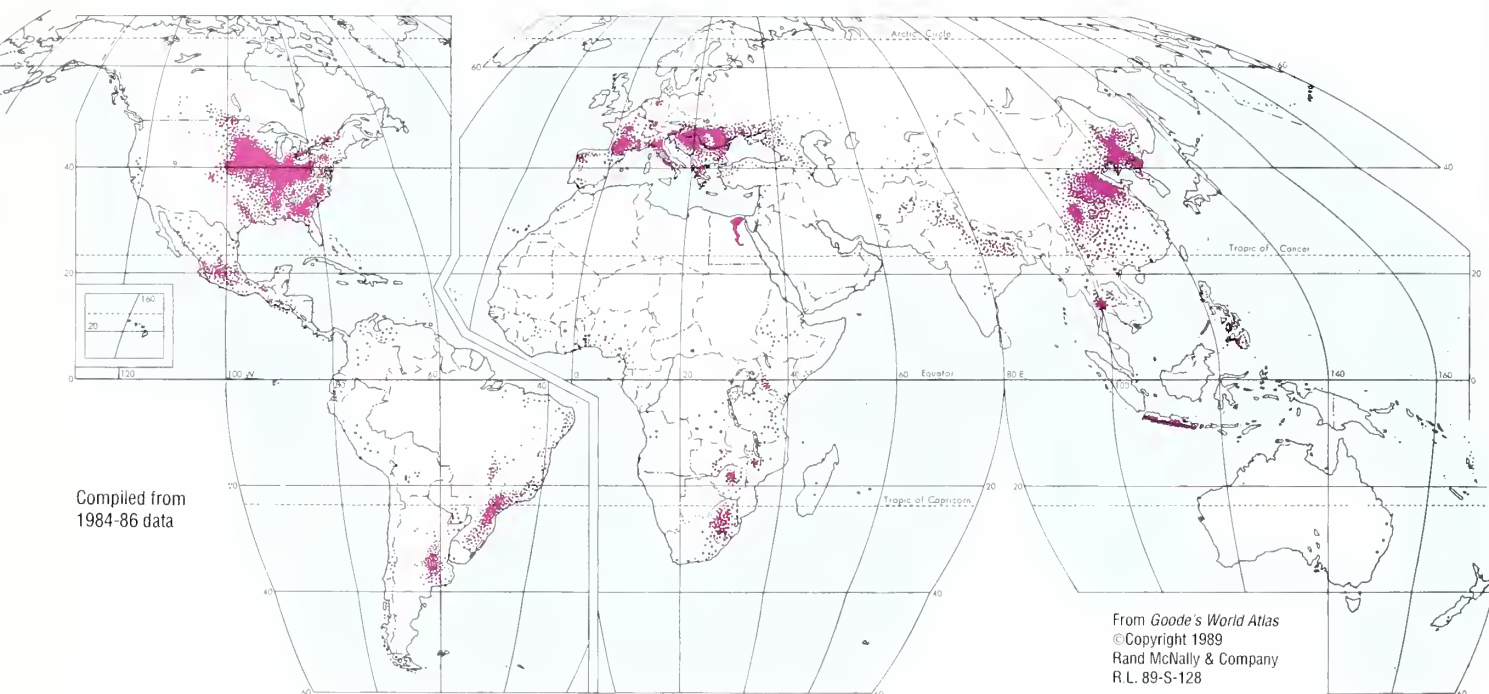
Southeast Asia

	Coffee	Citrus
JAN	Philippines	
FEB	Philippines	
MAR	Philippines	
APR	Philippines	
MAY	Indonesia	
JUN	Indonesia	
JUL	Indonesia	
AUG	Indonesia	
SEP	Indonesia	
OCT	Indonesia	
NOV	Philippines, Indonesia	
DEC	Philippines, Indonesia	

South and East Asia

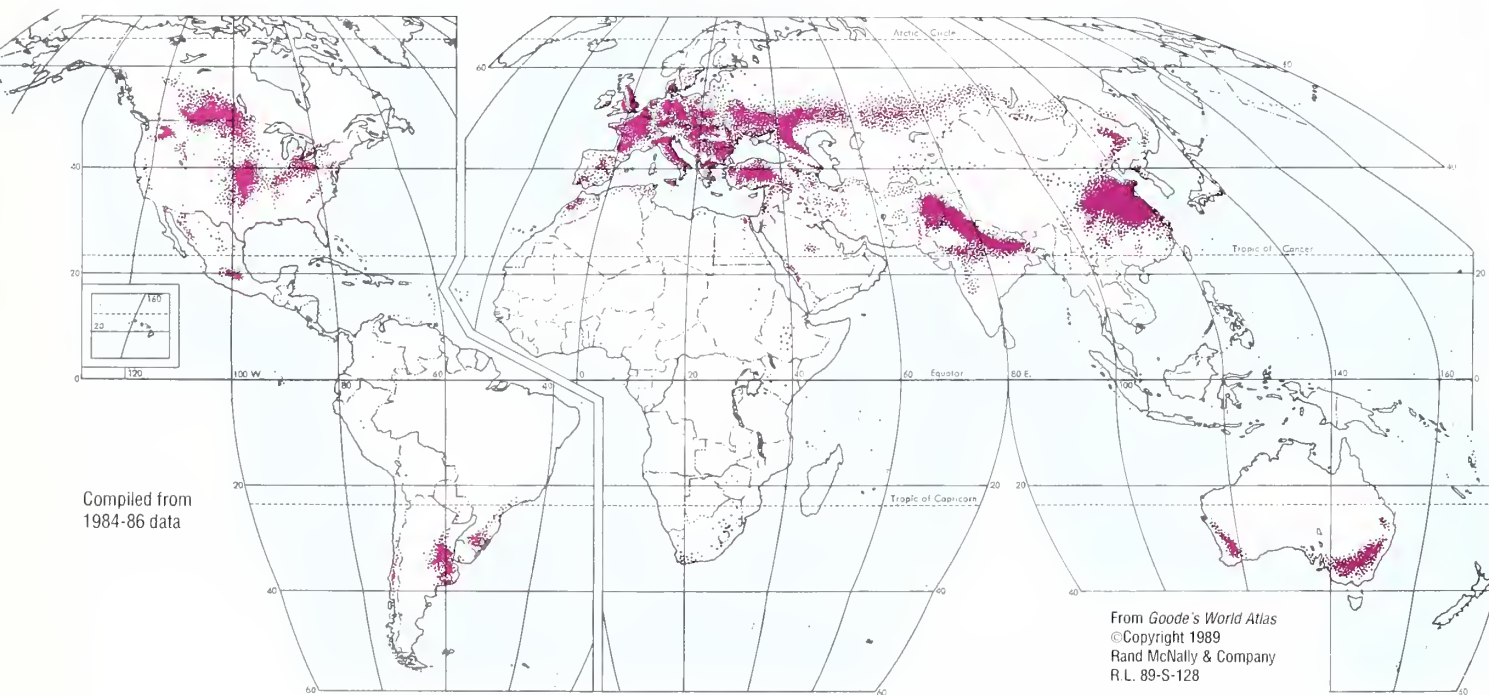
	Coffee	Citrus
JAN	India	
FEB	India	
MAR		
APR		
MAY		
JUN		South Asia
JUL		South Asia
AUG		South Asia
SEP		
OCT	India	
NOV	India	
DEC	India	

Where Corn Is Produced



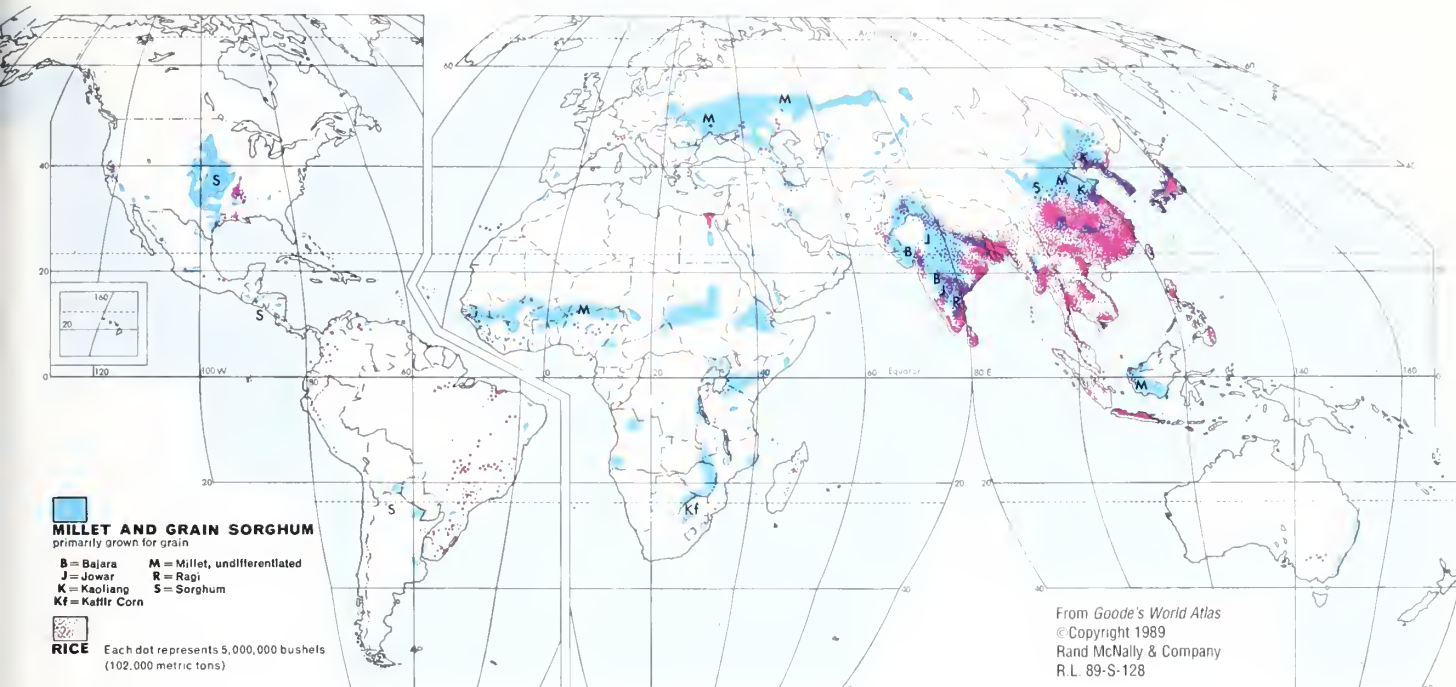
CORN Each dot represents 3,000,000 bushels (76,200 metric tons)

Where Wheat Is Produced



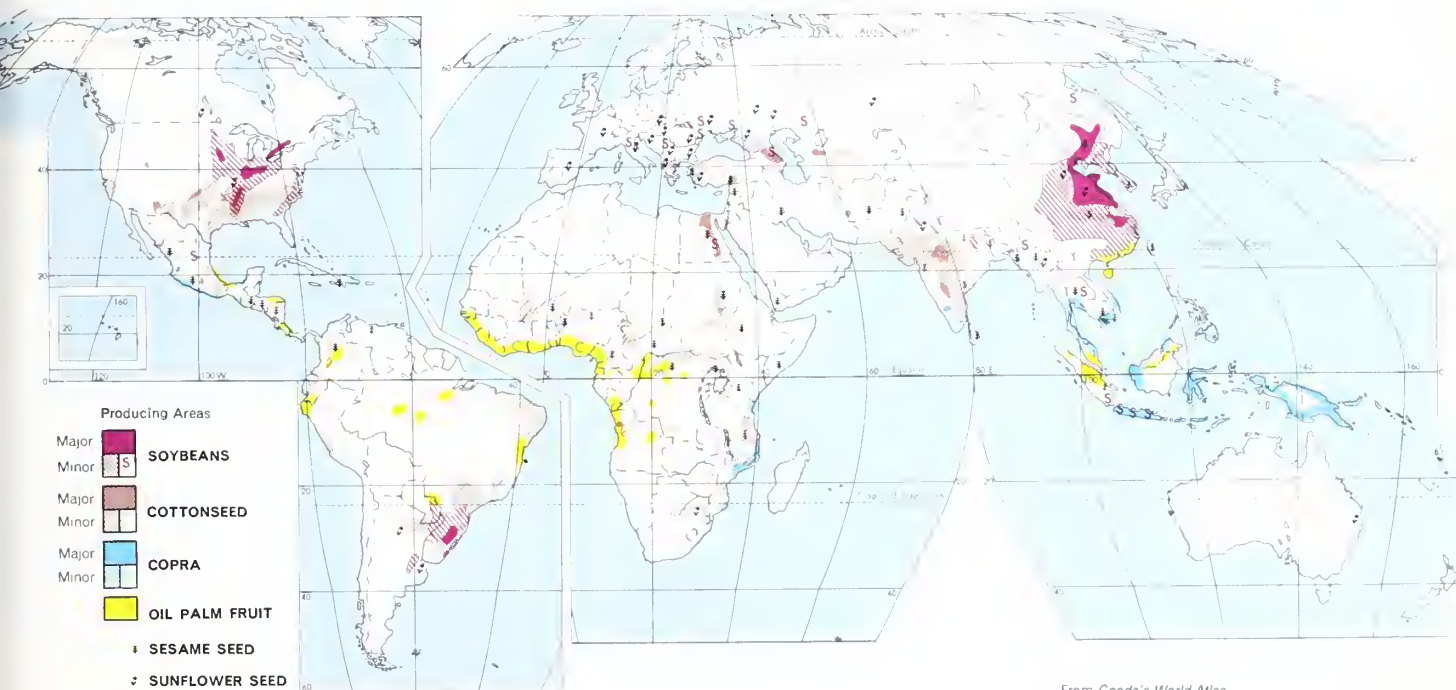
WHEAT Each dot represents 2,000,000 bushels (54,400 metric tons)

Where Rice, Millet, and Grain Sorghum Are Produced



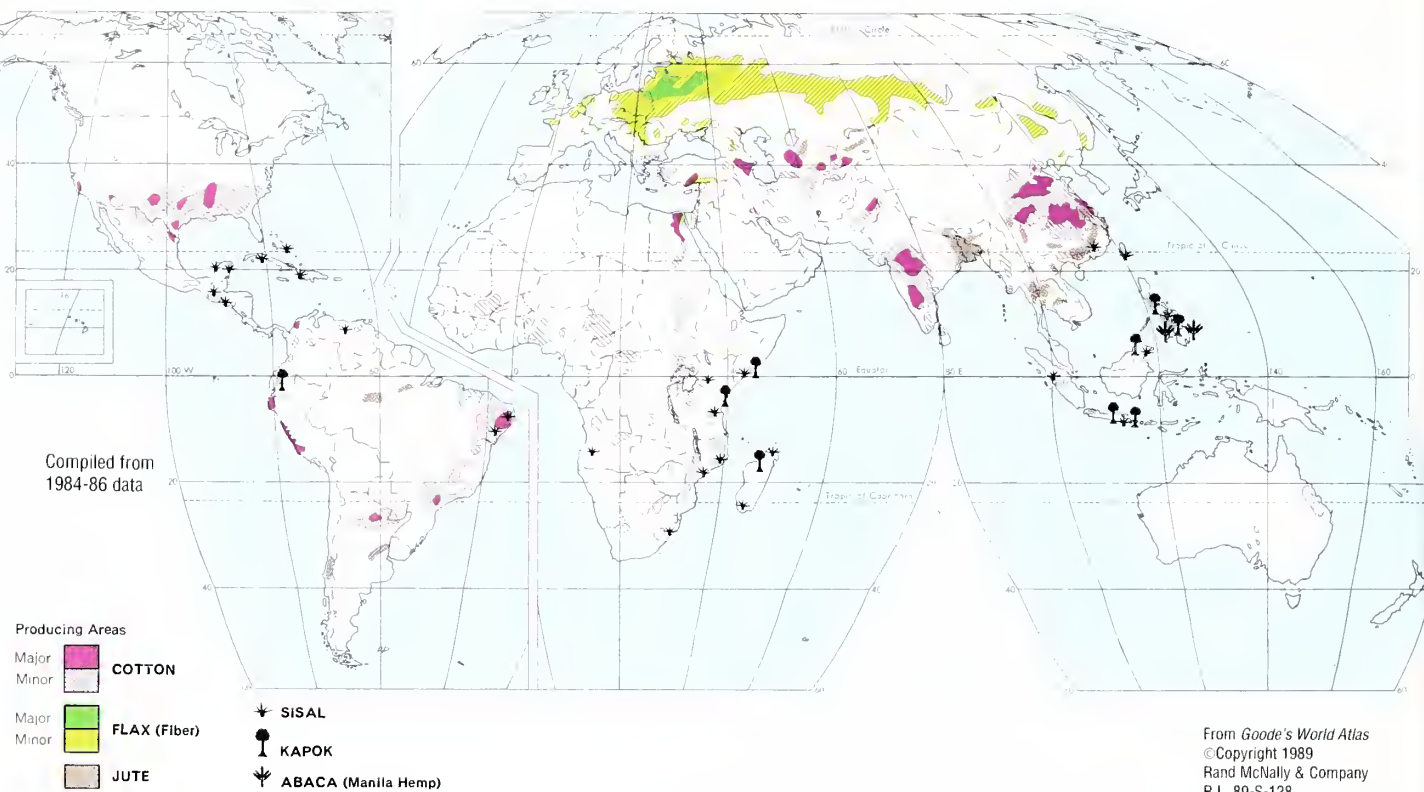
Compiled from
1984-86 data

Where Soybeans and Other Oilseeds Are Produced

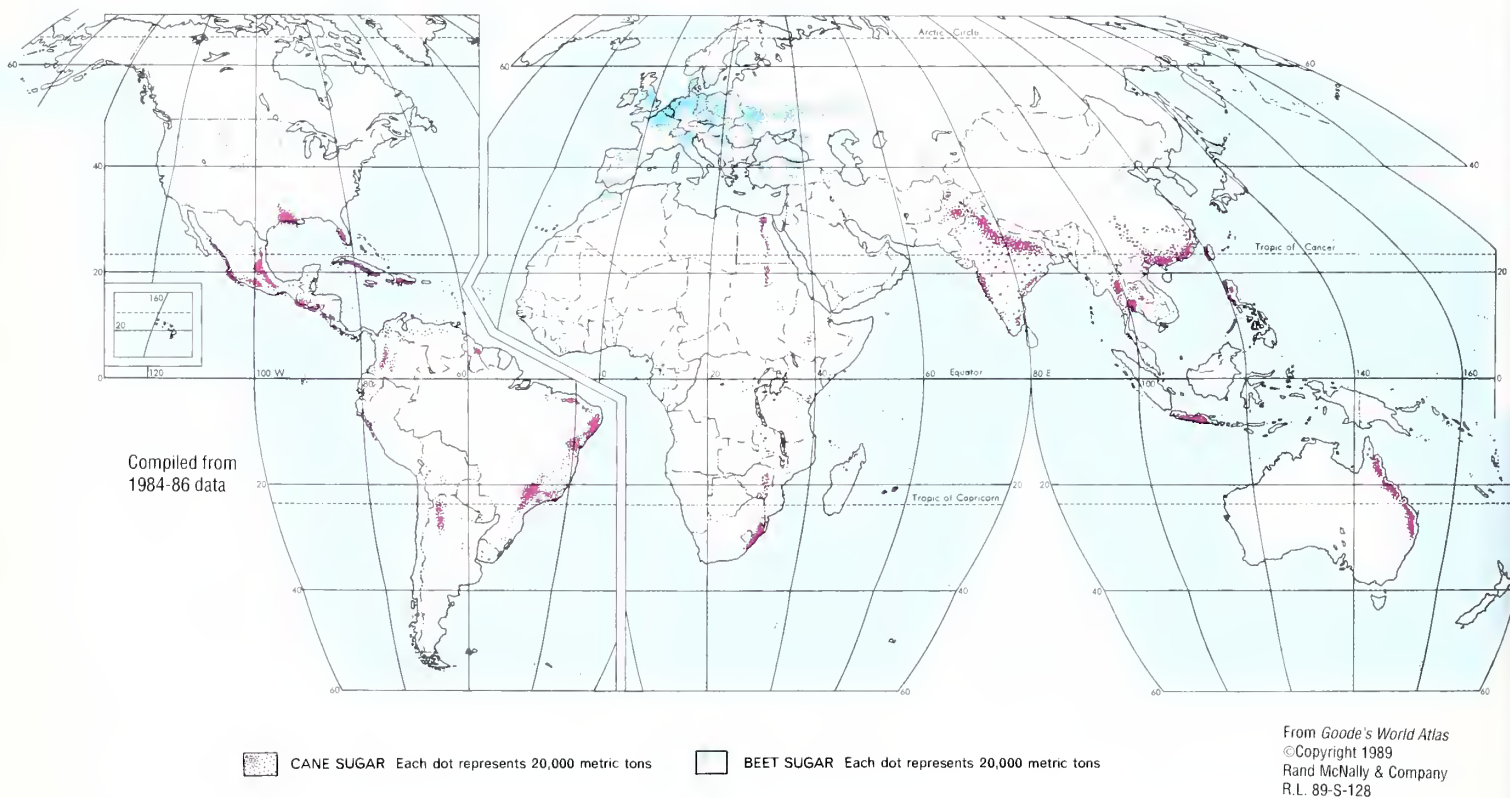


Compiled from
1984-86 data

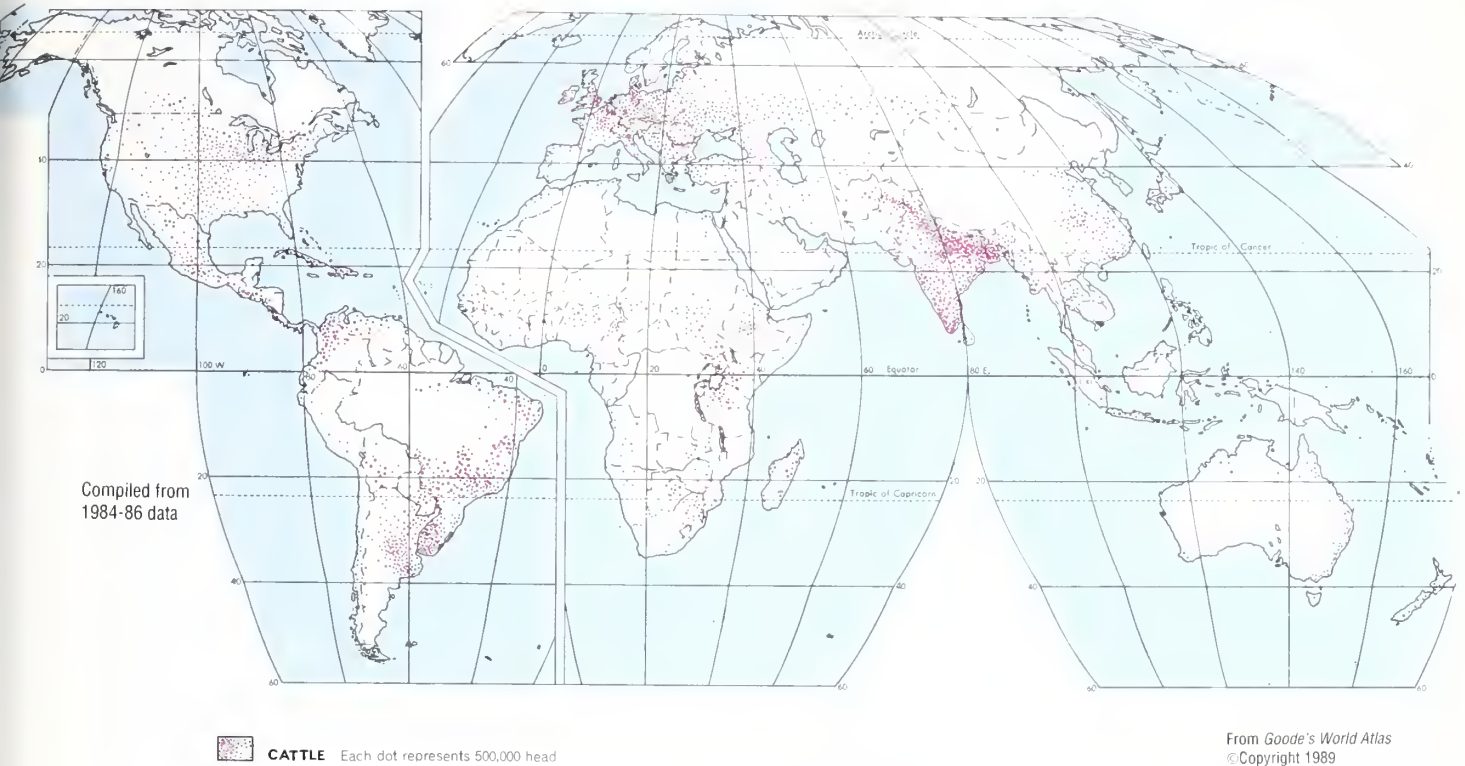
Where Cotton and Other Natural Fibers Are Produced



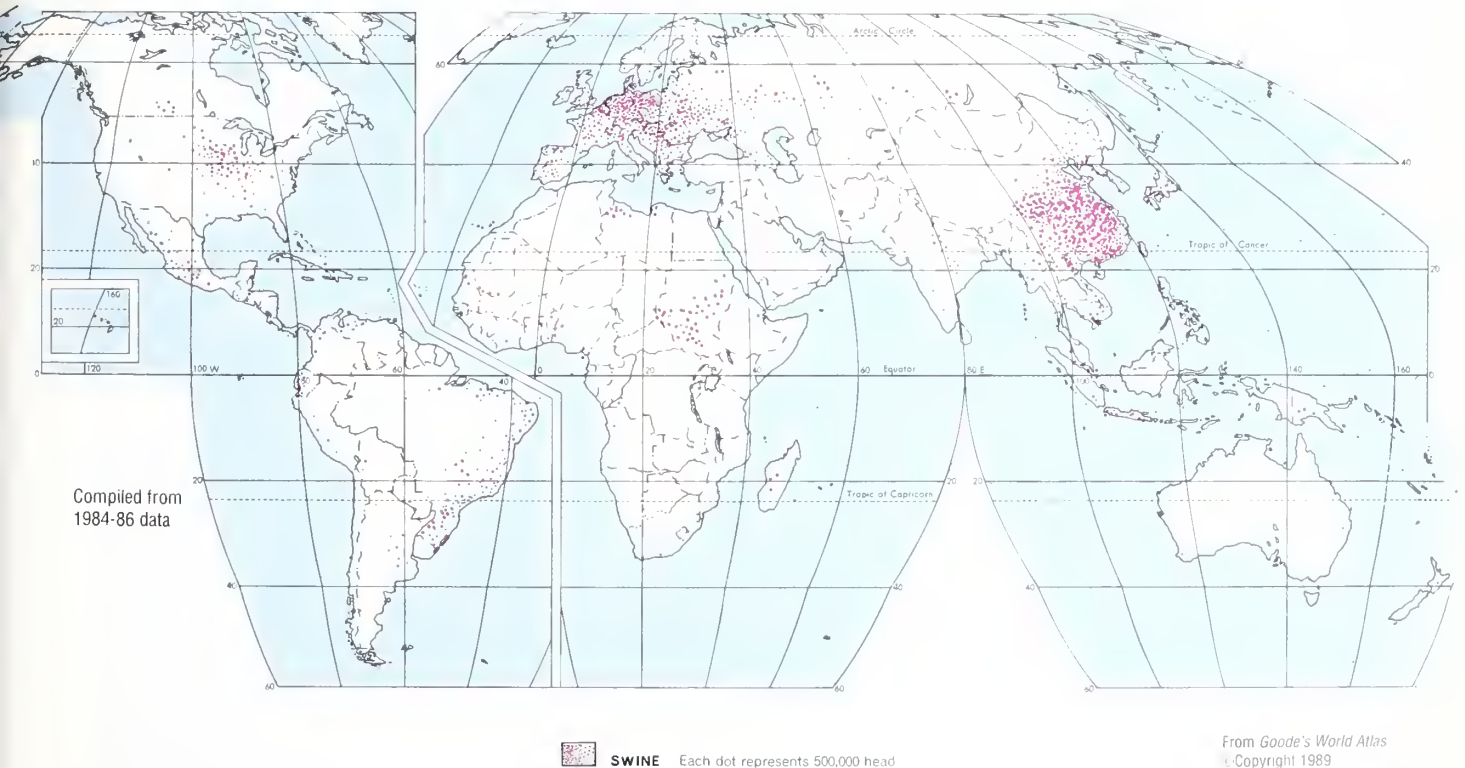
Where Sugar Is Produced



Where Cattle Are Produced



Where Hogs and Pigs Are Produced

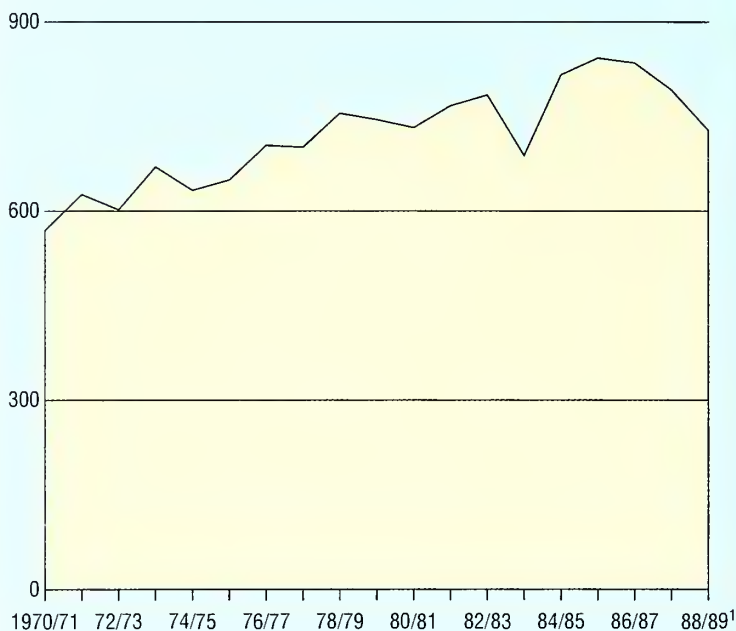


Coarse Grains Production and Trade



World Production Since 1970

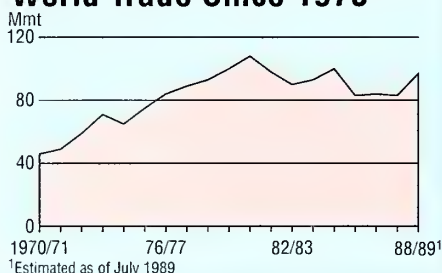
Million metric tons (mmt)



Top Producing Nations, 1987/88

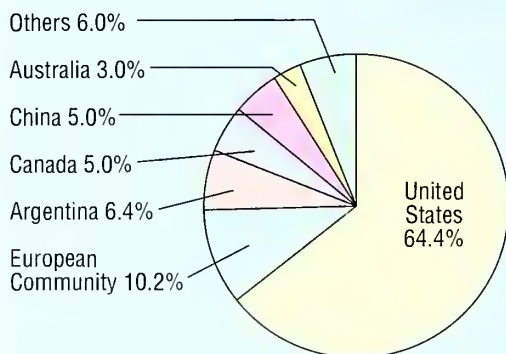
	Production	Share of world total
	mmt	percent
United States	215.9	27.3
USSR	113.7	14.4
China	95.8	12.1
European Comm.	82.4	10.4
Eastern Europe	64.6	8.2
Canada	25.5	3.2
Argentina	13.1	1.6
South Africa	7.9	1.0
Australia	6.8	0.9
Others	166.4	21.0
World total	792.1	100.0

World Trade Since 1970



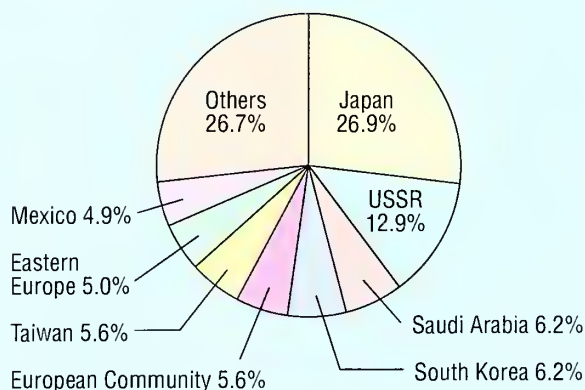
Leading Exporters

Share of total world exports, 1987/88



Leading Importers

Share of total world imports, 1987/88



Coarse grains include corn, sorghum, barley, oats, and rye. Data are reported on an October/September basis since 1976/77. Intra-EC trade is excluded.
Source: *World Grain Situation and Outlook*, July 1989, Foreign Agricultural Service, USDA.

Wheat Production and Trade



World Production Since 1970

Million metric tons (mmt)

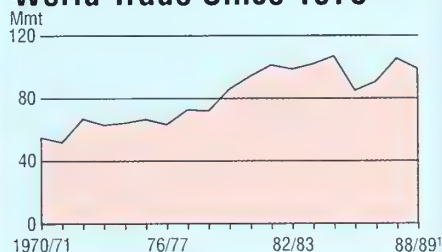


¹Estimated as of July 1989.

Top Producing Nations, 1987/88

	Production	Share of world total
	mmt	percent
China	85.8	17.1
USSR	83.3	16.6
European Comm.	71.4	14.2
United States	57.4	11.4
India	44.3	8.8
Eastern Europe	39.8	7.9
Canada	26.0	5.2
Australia	12.4	2.5
Argentina	8.8	1.8
Others	72.5	14.4
World total	501.8	100.0

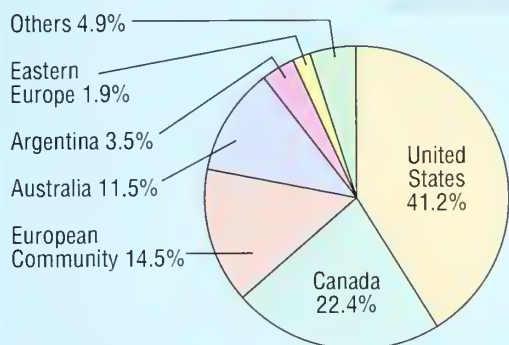
World Trade Since 1970



¹Estimated as of July 1989.

Leading Exporters

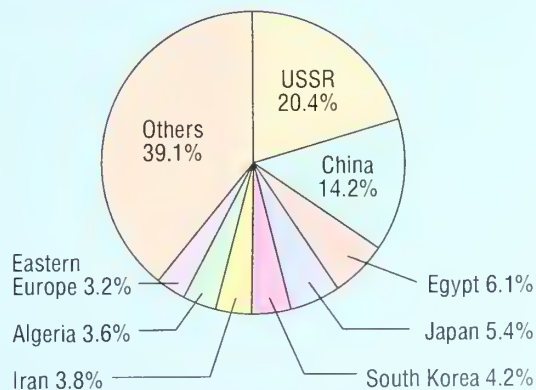
Share of total world exports, 1987/88



Total = 105.5 million metric tons

Leading Importers

Share of total world imports, 1987/88



Total = 105.5 million metric tons

Exports include the grain equivalent of wheat flour. Data are reported on a July/June basis. Intra-EC trade is excluded.
Source: *World Grain Situation and Outlook*, July 1989, Foreign Agricultural Service, USDA.

Rice Production and Trade



World Production Since 1970

Million metric tons (mmt)

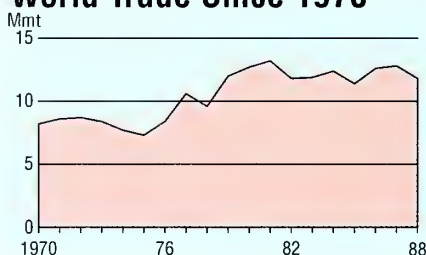


¹Estimated as of July 1989.

Top Producing Nations, 1987/88

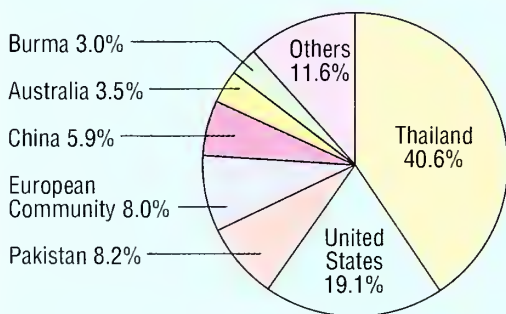
	Production	Share of world total
	mmt	percent
China	174.4	37.8
India	84.6	18.4
Indonesia	41.5	9.0
Bangladesh	23.1	5.0
Thailand	17.8	3.9
Japan	13.3	2.9
Brazil	11.8	2.6
Burma	10.8	2.3
South Korea	7.6	1.6
Others	76.1	16.5
World total	460.9	100.0

World Trade Since 1970



Leading Exporters

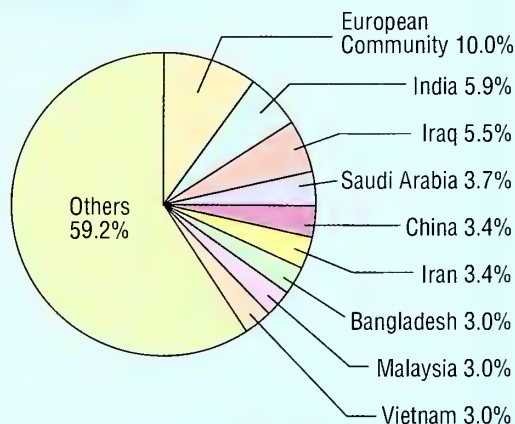
Share of total world exports, 1988



Total = 11.8 million metric tons

Leading Importers

Share of total world imports, 1988



Total = 11.8 million metric tons

Production data are for rough rice and are reported on a marketing year basis (aggregate of different local marketing years). Trade data are for milled rice (intra-EC trade included) and are reported on a calendar year basis. Source: *World Grain Situation and Outlook*, July 1989, Foreign Agricultural Service, USDA.

Oilseeds Production and Trade



World Production Since 1972

Million metric tons (mmt)

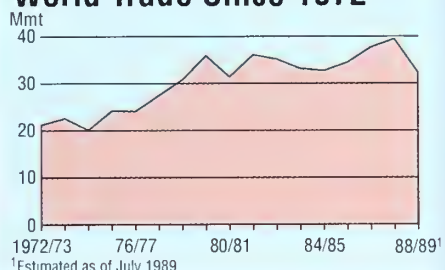


¹Estimated as of July 1989.

Top Producing Nations, 1987/88

	Production	Share of world total
	mmt	percent
United States	60.6	29.1
China	33.7	16.2
Brazil	19.7	9.5
Argentina	14.0	6.7
India	13.9	6.7
European Comm.	12.2	5.9
USSR	11.8	5.7
Canada	5.9	2.8
Indonesia	3.4	1.6
Pakistan	3.2	1.5
Turkey	2.0	1.0
Others	27.6	13.3
World total	208.0	100.0

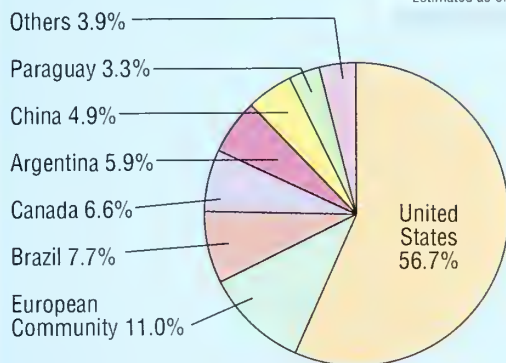
World Trade Since 1972



¹Estimated as of July 1989

Leading Exporters

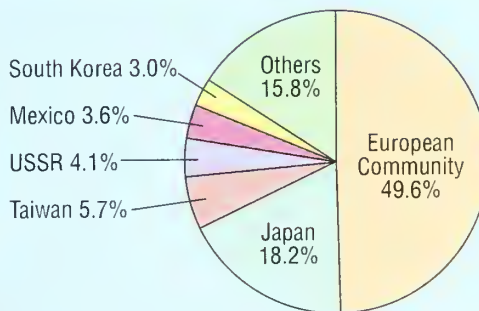
Share of total world exports, 1987/88



Total = 39.5 million metric tons

Leading Importers

Share of total world imports, 1987/88



Total = 38.0 million metric tons

Oilseed data include soybeans, cottonseed, peanut, sunflowerseed, rapeseed, flaxseed, copra, and palm kernel. Data are reported on a marketing year basis (aggregate of different local marketing years). Trade data include intra-EC trade. No adjustment is made for transit times, reporting discrepancies, and other factors that result in differences between world export and import totals.

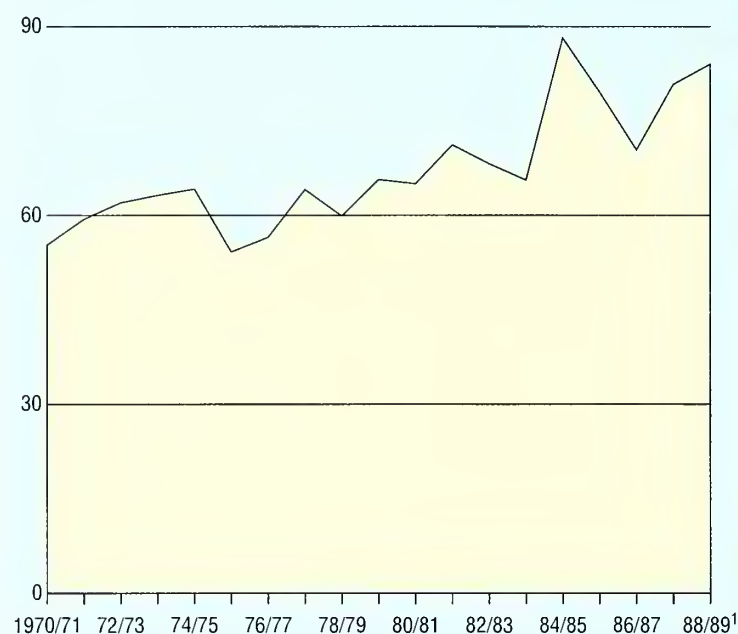
Source: Oilseeds and Products Division, Foreign Agricultural Service, USDA.

Cotton Production and Trade



World Production Since 1970

Million bales

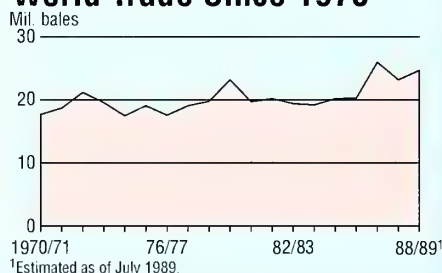


¹Estimated as of July 1989.

Top Producing Nations, 1987/88

	Production	Share of world total
	mil. bales	percent
China	19.50	24.1
United States	14.76	18.3
USSR	11.34	14.0
India	7.10	8.8
Pakistan	6.76	8.3
Brazil	3.47	4.3
Turkey	2.46	3.0
Egypt	1.61	2.0
Argentina	1.29	1.6
Australia	1.27	1.6
European Comm.	1.19	1.5
Others	10.08	12.5
World total	80.83	100.0

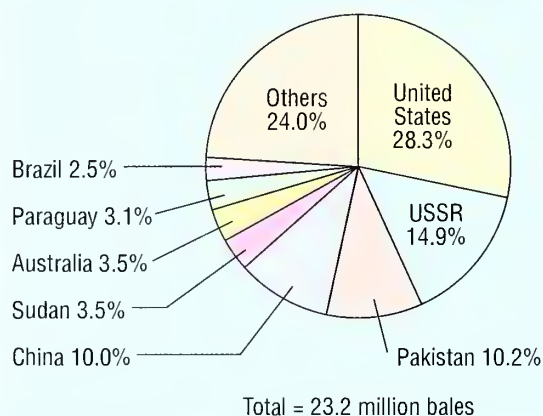
World Trade Since 1970



¹Estimated as of July 1989.

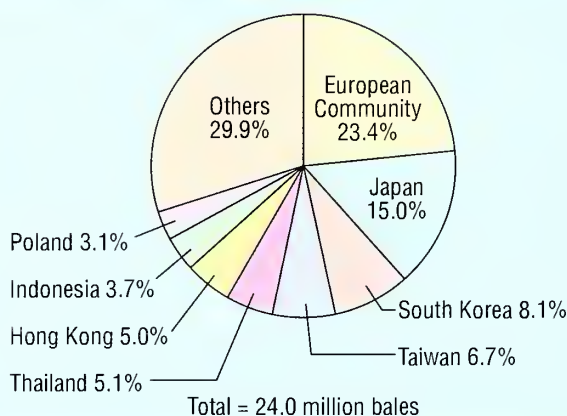
Leading Exporters

Share of total world exports, 1987/88



Leading Importers

Share of total world imports, 1987/88

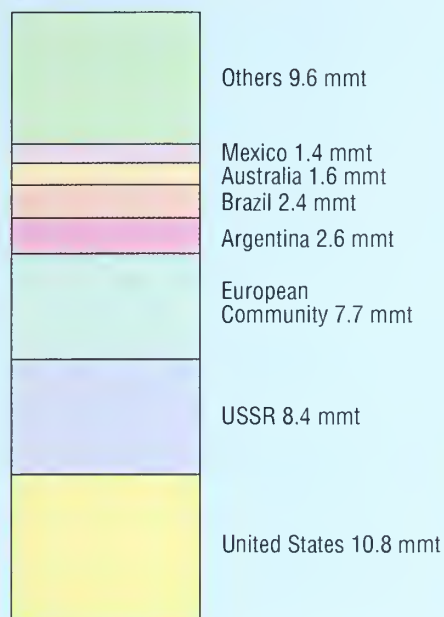


Data are reported on an August/July basis. Trade data include intra-EC trade. No adjustment is made for transit times, reporting discrepancies, and other factors that result in differences between world export and import totals.

Sources: *World Cotton Situation*, July 1989, and *World Cotton Statistical Supplement, 1964-88*, May 1989, Foreign Agricultural Service, USDA.

Beef and Pork Production and Trade

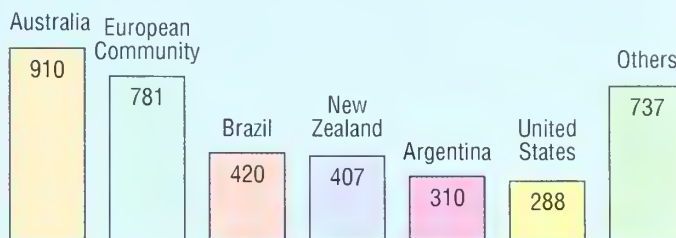
Leading Beef and Veal Producers, 1988



Total = 44.5 million metric tons

Leading Beef and Veal Exporters, 1988

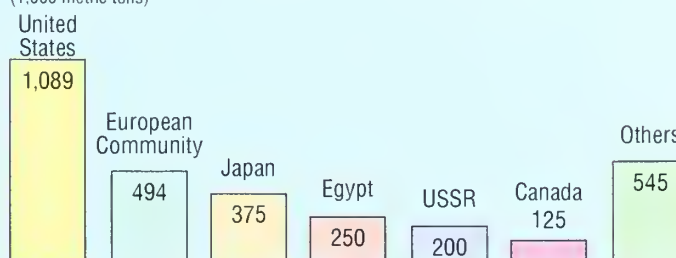
(1,000 metric tons)



Total = 3,853 thousand metric tons

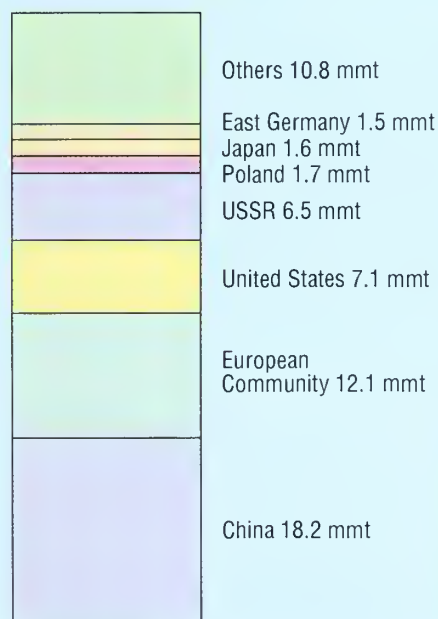
Leading Beef and Veal Importers, 1988

(1,000 metric tons)



Total = 3,078 thousand metric tons

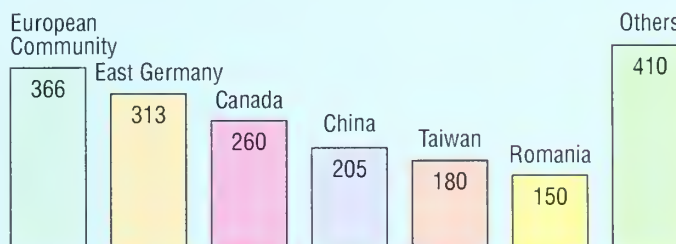
Leading Pork Producers, 1988



Total = 59.5 million metric tons

Leading Pork Exporters, 1988

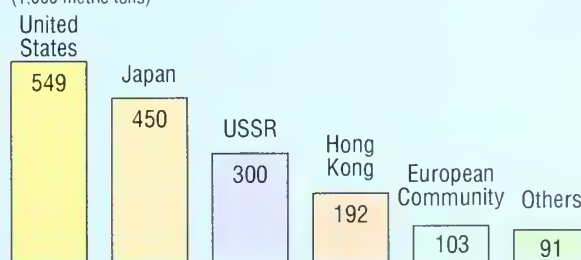
(1,000 metric tons)



Total = 1,884 thousand metric tons

Leading Pork Importers, 1988

(1,000 metric tons)



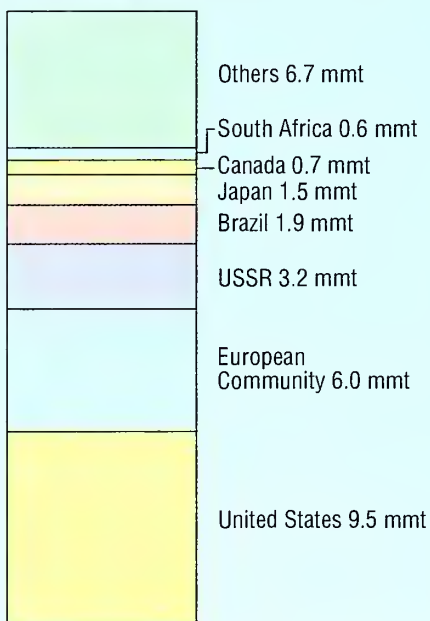
Total = 1,695 thousand metric tons

Trade totals exclude intra-EC trade. No adjustment is made for transit time, reporting discrepancies, and other factors that result in differences between world export and import totals. 1988 data are preliminary.

Source: *World Livestock Situation*, October 1988, Foreign Agricultural Service, USDA.

Poultry and Dairy Production and Trade

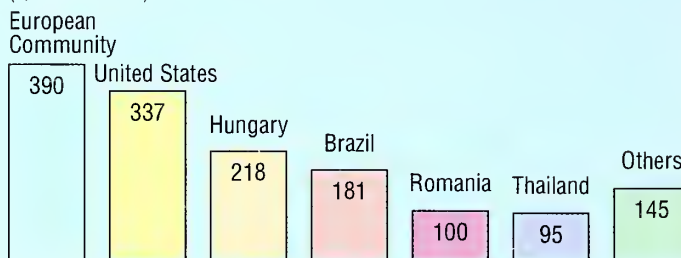
Leading Nations in Commercial Poultry Meat Production, 1988



Total = 30.1 million metric tons

Leading Poultry Meat Exporters, 1988

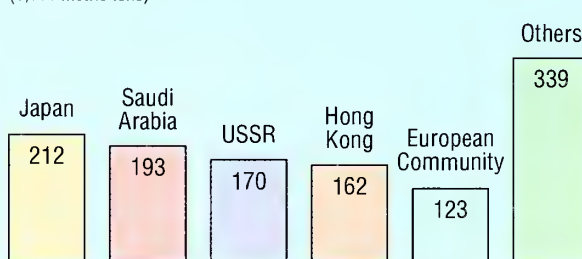
(1,000 metric tons)



Total = 1,466 thousand metric tons

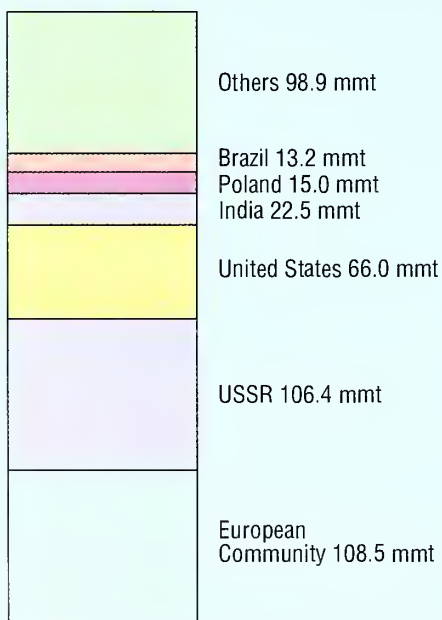
Leading Poultry Meat Importers

(1,000 metric tons)



Total = 1,199 thousand metric tons

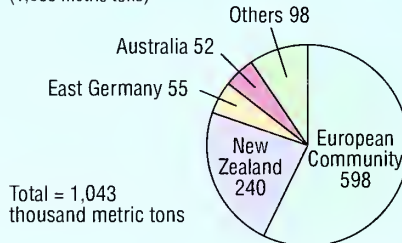
Leading Nations in Cow Milk Production, 1988



Total = 430.5 million metric tons

Leading Butter Exporters, 1988

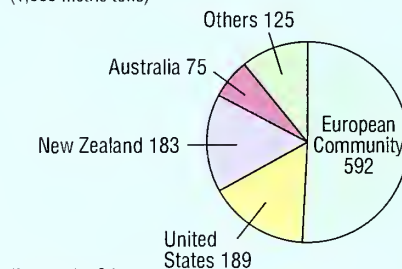
(1,000 metric tons)



Total = 1,043 thousand metric tons

Leading Nonfat Dry Milk Exporters

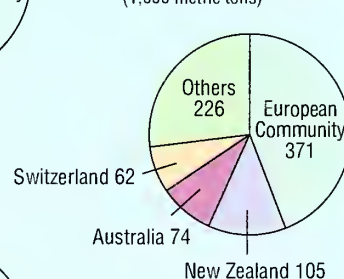
(1,000 metric tons)



Total = 1,164 thousand metric tons

Leading Cheese Exporters, 1988

(1,000 metric tons)

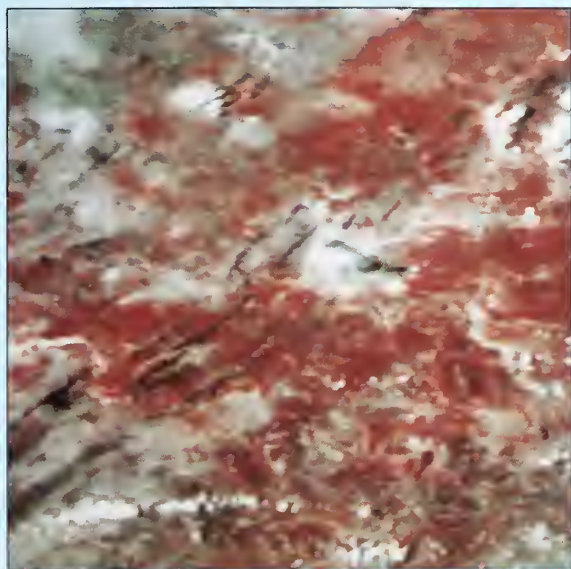


Total = 838 thousand metric tons

Trade totals exclude intra-EC trade. No adjustment is made for transit time, reporting discrepancies, and other factors that result in differences between world export and import totals. Poultry data are on a ready-to-cook basis; 1988 preliminary.
Sources: *World Poultry Situation*, Sept. 1988, and *World Dairy Situation*, June 1988, Foreign Agricultural Service, USDA.

Significant Climatic Events Affecting World Agriculture, 1987/88

The Indian Monsoons did not arrive in 1987. Resulting drought devastated more than 140 million hectares of production area and the food supply of over 816 million people. The satellite photos below show a 100,000-sq.-km.



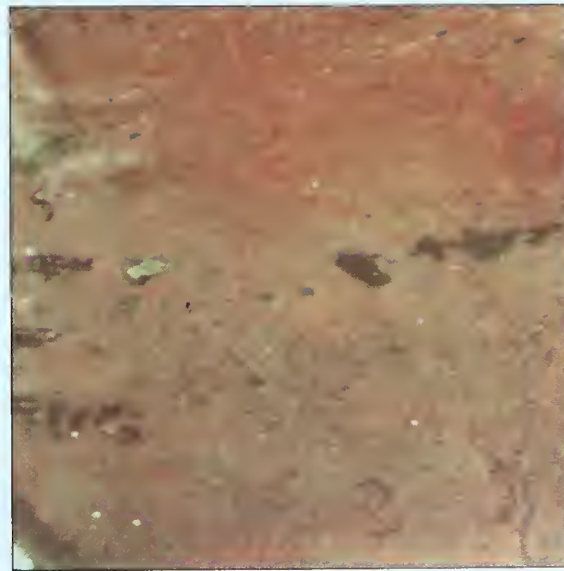
section of coarse grains in northwestern India. Sparse red color in left photo shows heavy crop loss. Dark red color in right photo shows 1988 bumper crop.



The Drought of 1988 reduced crop yields in areas throughout North and South America, up to 50% in some cases. Satellite photos below illustrate Argentine wheat production. Deep red color in 1987 photo (left) shows a



normal wheat crop in 100,000-sq.-km. section of southern Buenos Aires Province. Lighter red color in right photo shows drought effects 1 year later.



Source: NOAA-9 Satellite imagery from 700 km. altitude. Foreign Crop Condition Assessment Division, Foreign Agricultural Service, USDA

Leading Markets for U.S. Agricultural Exports, Fiscal 1988

	1st	2nd	3rd	4th	5th	6th	7th	8th
U.S. exports, in \$millions, to:								
All U.S. agricultural products U.S. total: \$35.33 billion	Japan 7,274	South Korea 2,250	Netherlands 2,087	Canada 1,973	USSR 1,934	Mexico 1,726	Taiwan 1,577	West Germany 1,306
Soybeans & products U.S. total: \$6.92 billion	Netherlands 1,029	Japan 964	Taiwan 457	USSR 450	Spain 356	West Germany 343	Mexico 322	South Korea 270
Feed grains & products U.S. total: \$6.06 billion	Japan 1,748	USSR 541	Taiwan 440	South Korea 431	Mexico 404	Netherlands 393	Spain 239	Venezuela 169
Wheat & products U.S. total: \$4.67 billion	USSR 822	China 525	Egypt 415	Japan 397	South Korea 264	Algeria 187	India 154	Morocco 133
Live animals & meat (excluding poultry) U.S. total: \$2.25 billion	Japan 1,159	Mexico 250	Canada 146	United Kingdom 145	France 137	Belgium-Luxembourg 46	Ireland 35	Netherlands 30
Cotton & linters U.S. total: \$2.15 billion	Japan 553	South Korea 457	Italy 137	West Germany 129	Indonesia 97	Taiwan 93	Thailand 72	Canada 56
Hides & skins U.S. total: \$1.84 billion	South Korea 677	Japan 452	Taiwan 180	Canada 122	Mexico 101	Italy 56	West Germany 38	Romania 30
Fruits & preparations U.S. total: \$1.71 billion	Japan 530	Canada 385	Hong Kong 111	Taiwan 87	United Kingdom 83	West Germany 61	Netherlands 58	France 52
Unmanufactured tobacco U.S. total: \$1.30 billion	Japan 263	West Germany 224	Netherlands 113	Italy 60	United Kingdom 55	Hong Kong 54	Taiwan 50	Spain 46
Vegetables & preparations U.S. total: \$1.28 billion	Canada 318	Japan 264	United Kingdom 69	Bahamas 43	Hong Kong 43	Mexico 35	West Germany 31	Netherlands Antilles 24
Feeds & fodders U.S. total: \$873 million	Japan 244	Netherlands 175	Iraq 76	Canada 73	France 44	United Kingdom 27	Portugal 24	Italy 24
Tree nuts U.S. total: \$791 million	West Germany 199	Japan 100	USSR 54	France 53	United Kingdom 49	Netherlands 44	Spain 43	Canada 33
Rice U.S. total: \$731 million	Iraq 157	Saudi Arabia 104	Belgium-Luxembourg 46	Philippines 43	Canada 39	South Africa 33	Haiti 24	Switzerland 21
Poultry & products U.S. total: \$647 million	Japan 172	Canada 71	Hong Kong 63	Mexico 51	Iraq 42	Singapore 29	Leeward & Windward Islands 18	South Korea 17

Fiscal 1988 ran from Oct. 1, 1987, to Sept. 30, 1988. Data include exports under concessional programs, such as P.L. 480. Netherlands is a major transshipment port, but complete data are not available to reallocate these transshipments to actual destinations; thus, figures for the Netherlands include the value of products destined for other countries. Source: *Foreign Agricultural Trade of the United States*, January/February 1989 issue, Economic Research Service, USDA.

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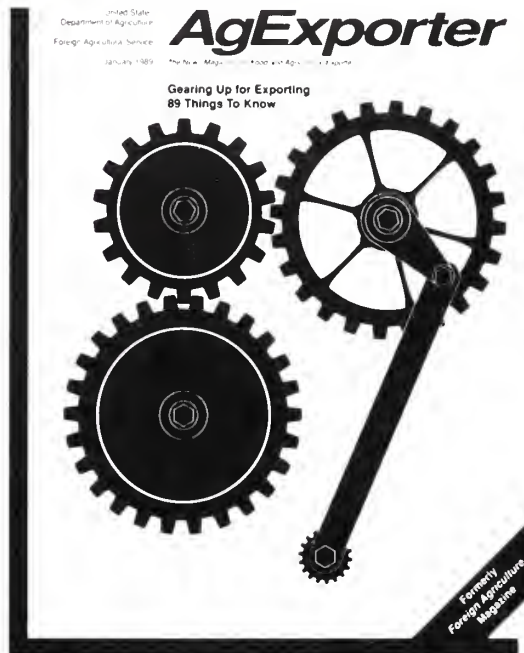
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